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**ROYAL COMMISSION OF INQUIRY INTO CERTAIN  
DEATHS AT THE HOSPITAL FOR SICK CHILDREN AND  
RELATED MATTERS.**

Hearing held  
8th floor  
180 Dundas Street West  
Toronto, Ontario

The Honourable Mr. Justice S.G.M. Grange

Commissioner

P.S.A. Lamek, Q.C.

Counsel

E.A. Cronk

Associate Counsel

Thomas Millar

Administrator

Transcript of evidence  
for  
September 12, 1983

VOLUME 31

**OFFICIAL COURT REPORTERS**

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*Freedom:*

*X: Swiss (cont'd)*

*Olaf*

*Stewart*

*Re: exam Roland*

*Orbach*

*X: Manning*

*Re: exam Roland*

*Re: exam E.A.*

*Re: X Hunt*

*Re: exam Roland*





ROYAL COMMISSION OF INQUIRY INTO CERTAIN  
DEATHS AT THE HOSPITAL FOR SICK CHILDREN  
AND RELATED MATTERS.

Hearing held on the 8th Floor,  
180 Dundas Street West, Toronto,  
Ontario, on Monday, the 12th  
day of September, 1983.

- - - - -

THE HONOURABLE MR. JUSTICE S.G.M. GRANGE - Commissioner  
THOMAS MILLAR - Administrator  
MURRAY R. ELLIOT - Registrar

- - - - -

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	and 35 Registered Nurses at
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(Cont'd)





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1 APPEARANCES: (Continued)

2

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4 E. FORSTER Counsel for Phyllis Trayner -  
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6 R.N.A.

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9 S. LABOW ) Mr. & Mrs. Gionas, Mr. & Mrs.  
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Murphy (parents of deceased  
children)

11 F.J. SHANAHAN Counsel for Mr. & Mrs. Dominic  
12 Lombardo (parents of deceased  
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13 W.W. TOBIAS) Counsel for Mr. & Mrs. Hines,  
14 P. KRAWEC ) (parents of deceased child  
Jordan Hines)

15 J. SHINEHOFT Acting for Lorie Pacsai and  
16 Kevin Garnet (parents of  
deceased child Kevin Pacsai)

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EMT.jc

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--- Upon commencing at 10:00 a.m.

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THE COMMISSIONER: Yes, Miss Symes?

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MS. SYMES: Thank you, Mr. Commissioner.

5

DR. ROBERT MARK FREEDOM, Resumed

6

CROSS-EXAMINATION BY MS. SYMES (CONTINUED):

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Q. Dr. Freedom, I believe that at the end of the last day's hearing on Thursday we established then that you had been asked by Dr. Rowe to get together some materials with respect to the first mortality conference on September 5th?

11

A. Correct.

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14

Q. 1980, and I gather then that you were away before that September 5th meeting that the nurses were concerned about the deaths on the ward?

15

16

17

A. Yes. As I said, I wasn't certain whether I was aware from the nurses or from Drs. Rowe and Jedeiken who told me and asked me to get this material together.

18

19

Q. I am just trying to place in time: your awareness then is before September 5th?

20

A. Yes.

21

22

Q. I had asked you yesterday or the last day about your very long hours --

23

A. Yes.

24

Q. -- while you were on the ward.

25

I gather that when you were ward chief you spent a great







A.2

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deal of your time at the Hospital on the particular ward?

3

4

A. That is correct.

5

6

Q. And that same contrasts too if you were not ward chief?

7

A. That is correct.

8

9

Q. So whereas if you are not ward chief you might still be in the Hospital 10, 12, 14 hours a day but you are not on the ward all the time?

10

A. That is exactly right.

11

12

Q. But when you were ward chief, for example, in August or October, you would have spent most of that time on the ward itself?

13

14

A. Well, I would certainly get in very early in the morning. I would look to see which patients had been admitted overnight when I wasn't on.

15

16

I would still see patients during the week, usually Tuesdays, Wednesdays and Fridays. I would still do catheters on Thursday, but I would spend much more time in the morning and in the afternoon rounding when I was ward chief.

17

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20

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Q. When you were ward chief you said you got in early. What does that mean?

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A. During that time I was trying to finish this textbook on angiography, at least the

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writing thereof, and I would sometimes get in my office at 5 o'clock, 5:30; sometimes a little later; 6:30.

Q. And you would go home - this is when you are ward chief?

A. We have sign-out rounds, you know, between four and five usually. I would sometimes considerably stay later than that tidying up, being sure that the consult notes were written on all the patients. Patients who were scheduled for surgery had been talked to, and so often I would try and leave by six-thirty, seven.

Q. When you were ward chief in August of 1980, were you aware that nursing meetings were held specifically on August 13th concerning the arrests and the cause of deaths?

A. No, I don't believe so. I certainly can't remember specifically that kind of meeting.

Q. Do you ever read the nursing communication book while you are ward chief?

A. No.

Q. Do you ever read the nursing ward book while you are ward chief?

A. I am not even sure I know what a nursing ward book is.







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Q. Apparently - my information is that it is a method that nurses use to communicate from one shift to the other given that they work 12-hour shifts?

A. No. I wasn't aware of that.

Q. In the meetings of September 5th and 26th which you attended --

A. Yes.

Q. -- were the nursing concerns twofold: No. 1, that they might be missing something, some observation during the shift before the baby arrests, and No. 2, that there might be something that they had not done during the resuscitation which would have made a difference?

A. I can't remember either of those two types of comments. As I recall the meeting and I don't have a great recollection of it, it was just that Dr. Rowe and Jedeikin presented the cases under consideration, and either Dr. Jedeikin or myself had commented on the pathology, and I can't remember too much specific discussion other than just commenting on the pathology and that type of interchange.

Q. Dr. Freedom, with respect to the arrest and resuscitation, had it been experienced on the ward, for example, 5A, that when you had arrests







A.5

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2

the staff, the arrest staff, had been able to  
resuscitate the child and get the child to the  
Intensive Care Unit?

4

5

A. I think it varied from arrest  
to arrest. But certainly some we were able to - again  
I can't remember specific names back to, you know, to  
old 5A days, but I would certainly think that some  
we would get there and some we wouldn't.

6

7

8

9

10

Q. So would you agree with me then  
that in some circumstances the arrest would occur on  
the cardiac ward, either 5A or 4A/4B, but if the baby  
died even though the resuscitation was successful  
that the death would have occurred on the ICU?

11

12

13

14

A. Again I have lost that out. As  
I said, I think they could have died either place. If  
it was successful initially they would surely have  
been transferred to the ICU.

15

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19

Q. Exactly. So once the arrest  
occurs the resuscitation efforts continue, if they  
are successful they go to the ICU?

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A. Correct.

Q. So if anything happens after  
that time I gather like death, it would occur on the  
ICU?

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A. Or in the surgical suite.





A.6

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Q. And was one of the concerns that the nurses said they didn't seem to be able to resuscitate to give them a second chance in the ICU?

A. It may have been a concern, but again I don't remember that being verbalized at that time.

Q. In neither of the September meetings?

A. I don't recall that.

Q. When you were ward chief in October, were you aware that there was a nursing meeting on October 23rd concerning the arrests and the cause of death?

A. Again I just don't have a specific recollection that I was aware of a nursing meeting.

Q. I am trying to draw your attention to approximately a month after the September mortality meetings.

A. Again I don't ever remember being invited to a specific nursing meeting as the ward chief to participate in that type of discussion.

Q. Dr. Freedom, I am sorry, I don't want to leave the impression that you were invited to it. My information is you were not in fact present at







A.7

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it, but were you aware that --

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A. No.

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Q. -- that a nursing meeting

5

occurred?

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A. No.

7

Q. You had said in your evidence

8

on page 5341 that nurses were invited to the cardio-vascular mortality conferences?

9

A. Yes.

10

Q. In the Department of Pathology

11

which occurred at 1 p.m. on Mondays?

12

A. Yes.

13

Q. First of all, I gather that

14

during the epidemic period those meetings were not in fact held every Monday?

15

A. That is exactly correct.

16

Q. In fact were there two or three

17

during that nine-month period?

18

A. Right.

19

A. And isn't it fair to say that

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due to the staffing concerns or staffing constraints on the nurses on 4A/4B, it is unlikely that they could be spared to attend those meetings on Monday afternoon?

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A. I would agree.

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Q. Would you agree with me that the two September conferences which I think you have said are unusual, were still a benefit to both the nurses and the doctors to air the matters of concern?

A. Yes, I thought so at the time.

Q. Now coming out of the two September meetings I gather that one of the suggestions was to solve the problem of the increasing deaths on the ward to establish an intermediate ICU on the ward?

A. Correct.

Q. And we have entered as an exhibit the minutes of the January 12th meeting. I gather you say you were not invited to attend that meeting?

A. Correct.

Q. Did you see the minutes of the meeting?

A. I don't remember if I saw, you know, at that time, or whether I saw them considerably later, but I do remember seeing them.

Q. But you knew I gather at the time that a committee was established to look into the feasibility of establishing such an intermediate ICU?

A. Correct.

Q. And that a report was made by that committee?







A.9

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A. Yes.

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Q. And I gather it was headed up

4

by Dr. Fowler?

5

A. I believe so, with the head

6

nurses.

7

Q. Now did you agree that the

8

establishment of an intermediate ICU would reduce the  
death rate on ill patients cared for on the ward?

9

A. Certainly that is what we had

10

hoped.

11

Q. Did you have any reservations

12

about that as a solution?

13

A. No.

14

Q. Were you aware of the serious

15

concerns raised by Nurse Specialists Putherbough and  
Beed in their memo of March 20, 1981, which is Exhibit  
155?

16

17

Perhaps, Mr. Elliot, could you show

18

the witness 155?

19

A. I don't believe I have ever

20

seen, or excuse me, I didn't see this document  
commensurate with this March 20th date. I do remember  
being told either by Dr. Fowler or Dr. Rowe after the  
events of that weekend that, you know, they had put

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A.10

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this memo forward or at least they communicated their concerns.

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Q. I just want to go through the actual contents of it. I am just going to ask whether or not you agree with some of the opinions expressed therein, but I would also like to put to you the response to this letter that Dr. Rowe made in Exhibit 138 on April 23rd, 1981, and ask you if you have ever seen that exhibit?

10

Exhibit 138?

11

12

13

14

A. Again I believe I have seen this memo or talked to Dr. Rowe about the memo. I just can't remember if I have seen it specifically, but certainly I remember him chatting to me about it.

15

16

Q. I would just like to turn you to the conclusion and ask you if you agree with certain of these statements that have been made.

17

First of all --

18

19

A. I am sorry, the conclusions of the Beed memo or the Rowe memo?

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Q. No, of the 138.

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First of all, I would like your understanding with respect to the changes that would be available for patient care if the intermediate ICU were established on the ward.







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I gather one of the things would be that there would be an increase of nurses and so there would be more nurses available to do closer monitoring of the babies?

A. Correct.

Q. And I gather also that there would be an increase in the level of nursing skills of those nurses who work in the intermediate ICU?

A. Yes.

Q. Specifically what skills would be needed that they didn't already have?

A. There was considerable discussion from January that one would need to have arterial and venous lines in; one would have to become familiar with the maintenance of these types of lines to set transducers, excuse me, to balance transducers; to care for the arterial line and to monitor the intra-arterial blood pressure and venous pressures.

Q. And I gather that all of these things mean that there would be an increase in the monitoring equipment that would be available to assist the nurses in the care of these children?

A. Right.

Q. And I gather also that in the Intensive Care Unit itself that there is much more





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A.12

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extensive medical coverage 24 hours of the day than  
there was on 4A/4B?

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A. Yes. I would think that is a  
fair statement.

5

6

Q. Was it also contemplated there  
would be an increase in medical staff?

7

8

A. Yes. I believe that we had  
placed or again I would have to check my notes, but  
we were going to put two senior staff cardiologists  
as ward chiefs at that time. We would have two  
Fellows to cover the 4A/4B geographic area, and we  
were going to either require or had gotten another  
paediatric resident.

9

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Q. But Dr. Freedom, this would all  
be increased medical support that wasn't available to  
the nurses during the epidemic period?

15

16

A. Yes.

17

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Q. In page 4 of Exhibit 138 (that  
is the memo from Dr. Rowe) I gather that one of the  
things that he states in the memo is that there has  
been a decreasing number of Fellows because of the  
shortage of money generally available to the  
Cardiovascular Department.

21

22

Is that right?

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A. Yes. That has been a chronic  
concern.

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A.13

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Q. And I believe it is on page 4 that there has been relatively inexperienced paediatric residents and that there has been some problem of lack of their ability to communicate in English.

Do you agree that that was a problem?

A. Yes. I think from time to time we would have either a resident or a Fellow where English was not their primary language, where there was some difficulty.

Q. And do you also agree with the statement in the last paragraph on page 4:

"The strengthening of the sub-specialty resident support for 4A and B is one necessary component of patient care in that area which is additional to the need to increase nursing members."?

A. Yes.

Q. And do you agree, the last sentence:

"Now the effects of the reduction on patient care are becoming evident."

Do you agree that was true during the epidemic period? That is the decrease in the number of Fellows?





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A. Again, I remember - I don't have the exact time framework right at hand but I do remember we had been reduced one year to the next I think by two Fellows which placed an increasing workload on all of us.

I just can't remember, you know, what Dr. Rowe was referring to at that note, but certainly we were aware of it.

Q. And you were aware then that you needed more extensive coverage, medical coverage, in order to accomplish the goals on 4A/4B of good patient care. I would like to go back to one comment about the lack of perception or language difficulties.

We were aware of that as well in some of our Fellows, and I believe that during that period we actually had back-up for that Fellow, you know, I think we had two Chinese Fellows during that period of time and we provided them with back-up if there were problems.

Q. But do you agree with me that there were times at night when they would be the only medical staff that would be directly available to the nursing?

A. Yes.

Q. And that problems of communication





A.15

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did arise because of the English problem, the English  
language problem?

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A.

Yes. Again I think that if  
they are in the Hospital and their back-up is not,  
the first exchange would be with that individual, but  
we made it fairly clear, at least I thought it was  
clear at the time that there was back-up for them,  
so if there were communication difficulties hopefully  
such problems wouldn't continue.







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b/DM/ko

Q. Now one thing I want to establish, the ward chief I gather rotates from month to month?

A. Correct.

Q. And the end of the month is the care of the infants and children on the ward transferred over to the new ward chief?

A. Yes.

Q. And how is continuity of patient care assured?

A. Well again we are having ongoing sign-out rounds almost every night, so even when you are not ward chief you have at least some familiarity with the patients, at least in terms of the sickest patients.

During the few days before transfer each of us that goes on the floor will make a point of sitting down with the appropriate ward chief, discussing the major concerns, and then certainly, speaking for myself, the three or four days before I become ward chief I sit down and review each chart.

Q. I gather that the interns rotate every six weeks?

A. Again there seems, over the last year there seems to be some fluctuation as to exactly how long each rotation is. Some months when





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B 2

I was ward chief there was overlapping, so the entire staff didn't change at once. Some years ago I think we all changed at once.

Q. And how was there continuity of care assured from one intern group to another intern group?

A. Again when the interns and residents come on the floor they know whose patients they are going to inherit so to speak, and again in the charts you will see resident notes saying "change of service" or some type of - where the major problems are summarized.

It has been my experience that many of the times the residents coming on the floor, if there has been a day difference, will actually come up a day ahead of time and try to make rounds, the last sort of rounding business before the changeover.

Q. And I gather that the residents, the interns and residents coming onto the floor that that might be their first exposure to cardiovascular problems?

A. I think in some cases it would certainly be their most intense exposure to cardiovascular problems. There are children with heart disease on the seventh floor, 7G, and some infants who are admitted to 4C/D, so I think some of them have had





B 3

1  
2 some exposure, but the most intense exposure is to  
3 4A/B.

4 Q. I presume that their knowledge  
5 and experience at the end of the six weeks is better  
6 than day one?

7 A. We hope so.

8 Q. When did you ensure that the  
9 changeover of the chief and the interns did not take  
10 place at the same time? You said at one time they did  
11 take place at the same time.

12 A. I said at times it would be  
13 coincident, other times it wouldn't. I am not sure  
14 if there was a specific directive from Dr. Rowe to try  
15 and ensure that.

16 Q. Was that before or after March  
17 of 1981?

18 A. I just can't recall in the sense  
19 we have changed usually the first of the month unless  
20 it was on a weekend or a holiday, at that is ever since  
21 I joined the staff.

22 Q. And you can't remember when the  
23 direction came that they shouldn't all turn over at  
24 once?

25 A. Again I think the staff still  
will change; excuse me, the senior staff I suggested,  
the fellows now have a slightly longer duration of duty,







B 4

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so there is certainly an overlap with the fellows on  
the floor now.

3

4

MS. SYMES: Those are my questions.

5

THE COMMISSIONER: Thank you Ms. Symes.

6

Is anyone here from the Nursing Assistants? I guess  
Mr. Olah that means you are next.

7

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MR. OLAH: Thank you, Mr. Commissioner.

9

CROSS-EXAMINATION BY MR. OLAH:

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Q. Doctor, sitting here and

11

listening to evidence there are a couple of things  
that have been troubling me over the past couple of  
weeks and I am hoping you can assist me in clearing  
them up.

12

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14

First of all digoxin, is that a drug  
that is kept at all wards throughout the hospital, or  
would it just be kept in certain areas throughout the  
hospital?

15

16

17

A. I can't address that. I know it  
is kept on 7G; I know it is kept in the ICU; I know it  
is kept on the fourth floor, but since I don't work  
primarily on other floors I just couldn't answer that.

18

19

20

21

Q. Just assist me perhaps through  
your medical knowledge.

22

23

A. Yes.

24

Q. And if you can't help me then we

25

will leave it at that. Digoxin as we all know is heart

26





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medication, is there any reason for digoxin to be found  
in other areas of the hospital and other than perhaps  
in the Emergency being the only other area?

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A. Yes I think there is an  
indication of digoxin on other floors. Patients with  
cystic fibrosis, severe lung disease can have  
congestive heart failure. Patients with kidney failure  
and high blood pressure can have heart failure. And  
so just on those two floors alone I can see the need  
to have digoxin available.

11

12

Q. Now, you have told us that as far  
as you knew digoxin was found on 7G and the ICU?

13

14

15

16

A. Correct.

Q. Was the manner of keeping digoxin,  
prior to March 21st, 1981, on those floors similar to  
that in 4A and 4B? That is there was a medication  
cabinet and everyone had free and easy access to it?

17

18

19

A. Again that was my understanding.  
I would presume if it was that way on the fourth floor  
it would be that way on the other floors that had it as  
well.

20

21

22

Q. I don't want you to presume, from  
your experience on 7G and the ICU and I take you have  
some experience in those areas?

23

24

25

A. Yes sir.

Q. What was the manner in which





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B 6

2

digoxin was kept?

3

A. I don't know.

4

Q. You don't, okay. Then let us

5

turn to 4A/B. First of all as I understand it

6

digoxin was kept in a medicine cabinet, or area next  
to the nursing station?

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A. Yes, that is true.

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Q. Do you know if there was some

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sort of inventory kept on digoxin from time to time,  
or is that something someone else can answer?

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A. I would presume that most

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medication had some form of inventory, I was just not  
aware of how it was done.

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Q. I don't want you to presume, I

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would like to have your knowledge. So I take it you  
don't know whether there was --

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A. I don't know.

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Q. Okay. So you wouldn't know, for

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instance, how often digoxin would be brought to the

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floor and how often it would be reviewed as to whether  
further refills would be necessary from the pharmacy?

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A. That is correct.

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Q. Now perhaps you can help me in

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this area. Do you know if digoxin is available

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outside the hospital say in a drug store?

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A. As over the counter?

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Q. As over the counter?

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A. No, it is not.

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Q. So as far as you are aware I  
couldn't walk into a drug store and ask for digoxin?

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A. I think you could ask for it,  
and unless you had a prescription I don't think they  
would give it to you.

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Q. It wouldn't be filled?

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A. No.

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Q. A prescription is required?

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A. Yes.

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Q. I would like then to turn your  
attention to a different area. First of all from your  
curriculum vitae, which is Exhibit 167, I notice that  
throughout 1976 to 1980 you had an appointment as  
Assistant Professor of Pathology at the University  
of Toronto, and since 1980 you are a full Professor  
of Pathology?

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A. Correct.

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Q. As I understood your evidence,  
your appointment at the hospital is a cross appoint-  
ment in the sense that you are appointed both to  
cardiology and to pathology?

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A. Correct.

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Q. Perhaps you could assist me in  
this. Could you tell us what the hierarchy, or chain

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of command was in the Pathology Department?

A. As of 1976?

Q. Well I would like to talk about it as of January 1980, I am sorry, January of 1981.

A. I believe that Dr. Phillips was then - excuse me, and is still Chief of Pathology and Director of the section of Pathology. He has several senior staff pathologists who have full-time hospital appointments.

Q. Was Dr. Cruz one of those chief pathologists?

A. I am sorry, I didn't catch the name?

Q. Dr. Cruz, C-r-u-z, his name appears on a number of --

A. Dr. Cutz, C-u-t-z?

Q. Yes.

A. Yes.

Q. All right.

A. Dr. Mancer, Dr. Becker, I think that Dr. Meredith Silver was one of the pathologists, then there are certain research fellows and residents in pathology.

Q. Okay. Was Dr. Taylor a resident in pathology?

A. Yes.





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Q. And a pathologist, I am sorry,  
a resident pathologist, how often would he rerotate  
through, would he rotate every six months, would he  
be there for a calendar year?

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Q. You have told us residents  
started July?

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A. Well again our residents, the  
pediatric residents and the cardiology fellows have a  
year to year appointment that starts July 1st.

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Q. And so that if there was a six  
month rotation in some specialty area, such as  
pathology, that resident would rotate out some time  
in late January?

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A. Late December.

Q. Late December, early January?

A. Correct.

Q. Well, do you know if Dr. Taylor  
in this case was there after mid-January of 1981?

A. It is my understanding that he  
actually started in January of 1981.







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Q. Now we have talked about the chain of command. I would like to talk about reporting for a moment. I take it the purpose of the Pathology Department is sort of a safety valve with respect to certain areas in the hospital. That is if something has gone wrong in an area it should be picked up by pathology and reported?

A. Well not - I am not sure I understand the connotation of that.

Q. I don't mean it in any derogatory manner. pathology is a back-up, is it not, to the wards?

A. I think it is a branch of medicine that addresses the post mortem findings. I think as I have said often they will complement the clinical findings.

Q. Well they have a further function, do they not Doctor, if there is a problem on the floor pathology is there to pick it up? Say there is some sort of epidemic or some sort of unexplained situation, pathology is there to assist in sort of looking back and running a cross check on the floor?

A. I find it a little bit difficult to answer that question in the sense that I think the pathologist would be reviewing the individual patient's charts that individuals are doing





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the autopsy on and would review it on an individual basis.

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Q. All right. Certainly if there was something revealed in autopsy that was abnormal, that is something that should be reported to the floor quickly?

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A. Yes.

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Q. Now what I wanted to get at was, how is this reporting, what is the chain of command in terms of reporting to the floor? Let's take the cardiology floor as an example?

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A. Well, as I have said in evidence already, often I would try and be there some time during the day when they are doing the cardiac case. If I wasn't there, not infrequently the residents on the floor, the ward chief, the surgical residents would come into the autopsy area, speak to the prosector, and I am not sure if there was an official chain or policy of command as to how communications would be exchanged.

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Q. Well, for example, if there was no one from cardiology and something was ascertained or determined at autopsy and there was a need to communicate it quickly, how would it be communicated to the cardiology floor?

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A. Well I would think, and again I think you would have to find an example for me to

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address, but I would think that if the prosector of the Department of Pathology has specific concern they would find out first of all if the patient died on the fourth floor, they would call 4A/B, they would ask to speak to the senior staff or to the resident involved and do it that way.

Q. All right, let's take a specific example then, Estrella.

A. Yes.

Q. We know that there was a report to pathology from the chemical analysis. How was that to be communicated, assuming that the finding came in after the autopsy had been carried out?

A. Well, as I have said, Dr. Taylor mentioned it to me some days or weeks later.

Q. I don't want to talk about that. I want to know what normal course of events would have dictated, in terms of reporting, would the normal course have been to pick up the phone, someone in pathology, and phone up the cardiology ward and say, you had better be concerned there is a high reading here?

A. I would think that it depends a little bit on the timing. I think if they found something at autopsy that was totally unexpected in terms of either the lesion or therapy that they would







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call the appropriate ward physician or surgeon. I think that the way the pathologist communicates certainly they do send up preliminary autopsy forms to the ward, excuse me, to the ward physician.

Q. Let me stop you there, Doctor. We know those forms take some substantial period of time to be completed, correct?

A. Yes.

Q. They have to be dictated, typed and delivered?

A. Correct.

Q. And some of these take several weeks and sometimes even months to arrive at their destination?

A. That's correct.

Q. So that if you had something urgent to communicate you wouldn't communicate it in that manner, would you?

A. No.

Q. So you would expect it to be reported by telephone?

A. Or by memo.

Q. Or by memo?

A. Yes.

Q. We know that it wasn't reported by memo in this case?





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A. Correct.

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Q. You have never seen such a memo?

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A. Correct.

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Q. So your expectation in this case would be, a telephone call would be the normal result?

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A. Correct.

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Q. Now, would you agree with me that a finding of 72 nanograms in this situation might be something of concern?

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A. Certainly as of today I would have great concern. Back in January of 1981 when I was informed I felt there was an error.

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Q. Well I am not asking for your state of mind, I am asking for the finding in pathology. You as a person in pathology, would you not be concerned about a finding of 72 nanograms in autopsy?

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A. Again it is an extremely high number and I would wonder how that level was obtained, either through error as we talked about earlier.

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Q. Certainly that is something that you would expect to be communicated to the cardiology ward, would you not?

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A. Or perhaps to me.

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Q. Or to you?

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A. Yes.

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Q. And from your evidence I take  
it that telephone call never occurred?

A. As I have said --

Q. As far as you are aware?

A. It wasn't a call, I did see  
Dr. Taylor I believe it was some days or weeks later  
and he mentioned it to me.

Q. But we are still talking about  
a telephone call. In the normal course of events you  
would have expected a telephone call and as far as you  
are aware that --

A. I can't remember a phone call  
from Dr. Taylor about that.

Q. Fair enough.

THE COMMISSIONER: What does it mean  
when they say "results flagged or reported today"?  
It is reported presumably to the ward some time, is  
it not?

THE WITNESS: I would presume so, yes.

THE COMMISSIONER: Where would it go  
when they reported it, I know you are not doing the  
reporting?

THE WITNESS: No. I would presume  
that they would notify the original source for the  
sample.





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THE COMMISSIONER: Whoever it was who ordered it?

THE WITNESS: Yes.

THE COMMISSIONER: And in Estrella it would be?

THE WITNESS: Dr. Taylor, Department of Pathology who ordered it.

MR. OLAH: Q. Perhaps just to clarify that, could I have Exhibit 91 please, that is the medical record of Janice Estrella. You don't have a copy of that before you, do you, Doctor?

A. No, I don't.

Q. Maybe I can show you my copy. And if we look at page 157 --

A. Yes, I see that page.

Q. The very last column says "DEST", does that mean destination, Doctor?

A. I presume so.

Q. Would that mean that the destination or the place to be reported by the clinical chemistry department be pathology?

A. Again I have to say I have not paid attention until very recently to the exact headings on these forms, because usually my residents would inform me of the results. I presume "DEST" does







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mean destination, although I guess it might mean something else.

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Q. Now, there was something else that puzzled me. We know that certain samples on occasion are kept after the autopsy, is that something occurs normally, or is it something that occurs only when a request is made?

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A. I just can't address that because - are you talking about blood samples?

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Q. I am talking about blood samples and tissue samples.

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A. I just - although I have a cross appointment in pathology, I don't deal with blood samples and this type of thing. I would think you would have to ask the senior pathologists how they would direct their residents to keeping samples and for what purpose.

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Q. So you are not aware, you yourself, of any policy and general guidelines of keeping samples in certain cases?

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A. I would certainly think if one is concerned about viral infection, hepatitis, blood infections, that one would possibly keep blood samples for further analysis.

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Q. What about directives from your





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wards, was there any directive as to keeping heart tissue or samples, or anything of that kind, with respect to any of these babies?

A. No, not that I recollect specifically.

Q. Now, as I understand generally you are present for at least part of the autopsy, if not all of the autopsy, when there is a complete autopsy?

A. I will have to answer that yes and no. In the sense that often the autopsy will be nearly completed, the prosector and pathologist will be examining the heart/lungs so I will be there to look at that aspect of the autopsy.

Q. Now that is something that always mystified me reading these reports. There is a prosector and a pathologist. Could you tell us what the difference is, because most of the reports are signed by two persons I note?

A. There is a pathology resident and a senior staff pathologist and perhaps the word prosector is vague. Usually the resident will do the autopsy and do the bisection under the instruction of the pathologist.

Q. Now would you be there normally





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for taking of say serum samples?

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A. Occasionally, you know, I would often try and get there when they wanted me to help them examine the heart. So if my timing, if I was early for instance I would see them occasionally take a blood sample.

Q. So that generally as I understand it serum samples are taken fairly early in the autopsy?

A. Yes, I would think so.

Q. And you generally arrived fairly late in the autopsy once the heart and the lungs have been dissected and are being examined?

A. Correct.

Q. Now is it - this may be outside your area of expertise but see if you can help me, Doctor. Is it normal to take serum samples in autopsies?

A. I think it is out of my expertise.

Q. I am sorry, I didn't hear that?

A. I think it is out of my expertise in the sense I think the individual pathologist having reviewed the chart, having had discussion with the clinicians would make that decision.







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Q. So in all fairness the bottom  
line with respect to this, in your evidence, is that  
you have only been there occasionally when serum  
samples have been taken?

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A. I certainly have seen it over the years, but again, because I am usually seeing patients in the morning or catheters I would try and get there just for that part of the autopsy that I am specifically interested in.

Q. I am not sure about your evidence in this regard. Were you there at the Estrella autopsy?

A. No.

Q. So, you don't know how, other than the sort of hindsight how the samples were taken?

A. That is correct.

Q. Now, there has been another person mentioned on Wards 4A/B that I was hoping you could help me with; that is a clinical pharmacologist?

A. I think it is a clinical pharmacist.

Q. Pharmacist. Can you tell me when that person was appointed or commenced their duties on Wards 4A/B?

A. I believe it was September of 1980.

Q. And what was the function of that pharmacist?

A. Again, it is my understanding,





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and again in chatting with her, to oversee the drug orders as she reviewed the charts - excuse me, the medical records and the doctor's orders to interface with the nursing personnel over the transcription of those orders.

Q What was her name?

A Her name is Livia, and I apologize, she has a long, difficult surname, I would have to look it up.

Q Do you know if she was just specifically assigned to 4A/B or did she have any duties on other wards?

A I believe she was assigned to the fourth floor. So, that could have been 4A/B, 4C/D, but again, I'm not a hundred per cent certain about that.

Q Okay. Another thing I was hoping you could clarify for me, Doctor, is the uniform that people wear on 4A/4B. Since the cardiologists are not surgeons, I take it that the surgery apparel isn't worn by the doctors and, in particular, by the residents?

A That's not entirely true in the sense that while we don't do surgery many of us do the catheter procedures. So, we would be wearing





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scrub outfits as we came back on the specific day

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that we did the catheter to the floor.

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Q. Okay. And on other days would you simply be wearing a white overcoat lab coat?

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A. Yes.

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Q. That would be the normal

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apparel for the doctors on the ward other than on days they are working in the catheter lab?

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A. Correct.

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Q. What about nurses, what kind of uniforms do nurses wear?

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A. Well, certainly today it is ---

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Q. Well, let us talk about July 1st, 1980 to March 31st, 1981.

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A. I know there was lots of white on the floor.

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Q. You can't be more descriptive than that?

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A. No.

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Q. You have mentioned a word or the phrase "sign-out round" on several occasions throughout your evidence. Can you elaborate and explain to me what that entails?

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A. Yes. What that entails is the cardiac fellows, or fellow I guess in those days, who

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is on the ward during a particular month and the fellow and staff that are coming on for that evening would discuss which patients are sick, sort of, the acute concerns where there might be problems over the evening, discuss, if we have any information about coming admissions, new babies in 7G and how the babies and youngsters in the ICU are doing.

Q. Okay. Would there be notes taken and kept with respect to such sign-out rounds?

A. I would often keep little notes for that evening and then I would throw them away the next morning.

Q. Okay. The last area I wanted to discuss with you, Doctor, was an area that Miss Forster discussed with you and that was damage to heart tissue by either resuscitation efforts or defibrillation efforts. I take it that the signs of damage to the heart tissue are noted at autopsy that is something that would be noted in the autopsy report itself?

A. I think you used the word "damage", isn't that right, just now?

Q. Yes, damage or scarring. What would you see as a result of such efforts?

A. Well, again, a number of these





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children had had surgery and if there has been surgery there is adhesions or tissue around the heart that is adherent between the heart itself and the sac of the heart called the pericardium. So, one could see a degree of scarring and occasionally one would see on the surface of the heart what looks like bruising.

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Q. This bruising possibly could be connected with resuscitation efforts?

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A. Definitely.

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Q. And you would expect to see such bruising if there was any serious or major damage occurring during the course of resuscitation efforts?

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A. I think that if there was major contusions to the heart during resuscitation, one would see it. I don't think you would see it necessarily on every resuscitation however.

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Q. Well, that is because most resuscitation efforts wouldn't cause that kind of bruising to the heart?

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A. Well, again, I'm not sure about that. I think that on little children it is very easy to manipulate the chest wall, they're thin, so, often one might expect to see some minor changes. But I think it would be difficult in the surgical cases to separate out what was caused at surgery and what was caused at the time of resuscitation.





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Q. Certainly if bruising were noted on the heart that is something that would be found on the autopsy report, would it not?

A. I would think so.

Q. Now, you say it's difficult to separate out bruising that occurs at resuscitation moments and bruising that occurs during the course of surgery. Is that what you're saying?

A. I think that would be my own impression, yes.

Q. And that is because of lesions caused or adhesions caused by the body as it overcomes the effects of surgery?

A. Yes, in the healing process.

Q. Well, what puzzles me is this, Doctor. Why would bruising be not noticeable? Is that because the adhesion is covered?

A. Or that it would be difficult to distinguish bruising that took place at the time of heart manipulation during surgery and that occurring some time later. Not infrequently the sick babies during the heart surgery, the hearts are handled, especially in some of the sicker babies, the hearts are massaged during surgery where there is contusion.

Q. Certainly if the surgery had







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taken place some time previous to the arrest, you would expect that bruising to have healed, would you not?

A. Again, you know, I'm a little uncomfortable talking about the timing of these types of changes because I don't do the microscopy work. I think there is a period of time from a bruising to the time it resolves and I am just not entirely sure of the time framework.

Q. All right. Can you assist us in giving us some sort of a rough framework as to how long a time it would take for bruising from surgery to heal or not be noticeable?

A. I just don't feel comfortable addressing that. My expertise is in gross anatomy of a malformed heart, not so much in terms of these more histological changes.

MR. OLAH: Thank you, Doctor. Thank you, Mr. Commissioner.

THE COMMISSIONER: Thank you, Mr. Olah. Miss Jackman?

MS. GOODMAN: Ms. Goodman, Mr. Commissioner. I have no questions at this time.

THE COMMISSIONER: All right, thank you. Anyone here from Mr. Manning's office?





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Mr. Tobias' office?

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MR. KRAWEC: Mr. Commissioner,

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Mr. Tobias is at a hearing for approximately a half an  
hour and I think he would like the opportunity to  
cross-examine Dr. Freedom.

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THE COMMISSIONER: Well, that will

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depend I would think upon -- yes. You don't want to  
take over for him?

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MR. KRAWEC: No, I just don't feel

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ready to jump in at this time.

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THE COMMISSIONER: All right. Well,

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we will see what happens.

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Mr. Shanahan?

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MR. SHANAHAN: Yes.

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CROSS-EXAMINATION BY MR. SHANAHAN:

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Q. Doctor, I don't think I have

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any questions of you because I think the evidence that  
you gave was that you didn't really have anything to  
do with Baby Dawson, is that correct?

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A. Correct.

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Q. And you performed on the Lombardo

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baby a technique, a diagnostic technique really of  
cardiac catheterization?

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A. That's correct.

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Q. And what you would have found

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there would have been passed on to those people that were dealing directly with her as to what they would do as a result of what you found?

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A. Yes.

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MR. SHANAHAN: Thank you very much.

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THE COMMISSIONER: Thank you very much, Mr. Shanahan. Mr. Shinehoft?

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CROSS-EXAMINATION BY MR. SHINEHOFT:

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Q. Yes, I have a few questions to

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ask.

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Doctor, I understand that in regard

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to the infant, Kevin Pacsai, that you were not involved in his day-to-day treatment because you were away

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during that time, is that correct?

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A. Yes.

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Q. And that you came back to the

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Hospital shortly after his death, is that correct?

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A. Yes, I think my first working

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day was March 13th.

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Q. As a matter of fact, there is

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some indication, and I believe it is Exhibit No. 109,

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that there was to be a meeting between yourself and Dr. Rowe and Dr. Fowler and perhaps Dr. Teperman as

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a result of this death, is that correct?

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A. Again, I saw that memo. I don't

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have it in front of me but I believe I saw that memo recently. I don't recall a specific memo to me through Dr. Fowler or Dr. Rowe.

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Q. So, you were totally unaware of this purported meeting or intended meeting, is that correct, Doctor?

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A. Yes.

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Q. And obviously the meeting never took place, to your knowledge, because you weren't there?

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A. Correct.

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Q. Have you had a chance, Doctor, to take a look at the preliminary and the final autopsy reports of this baby?

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A. I don't recollect specifically.

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Q. So, you have never specifically looked at these particular autopsy reports?

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A. No.

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Q. So, would it be fair to say that you would not wish to comment on the contents of those reports?

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A. That's correct.

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Q. But you did discuss with Mr. Percival I believe the question of interpretation of digoxin levels, is that correct?

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A. Yes.

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Q. And you indicated to him that

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your opinion has changed about the interpretation of  
these levels since 1981?

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A. Yes, that's true.

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Q. And you indicated as well that

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it is as a result of unfortunately the things that

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did happen at the Hospital as well as becoming

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familiar with some of the literature, is that correct?

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A. That's correct.

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Q. And would your opinion be in

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relation to digoxin levels after death?

13

A. Yes.

14

Q. And that would be because of

this so-called multiplier effect, is that correct?

15

A. I think there are several things

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that went into my equation as to the perceptions that

17

have caused me to change. One is certainly the concern

18

about change in the binding of digoxin to tissue,

19

heart muscle, skeletal muscle. I had not been aware

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of this digoxinlike substance that gives a positive

reading.

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Q. The substance X?

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A. Substance X.

23

Q. Yes.

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C.12

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A. And this type of thing.

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Q. Has your opinion, Doctor,  
changed in any respect with regard to premortem  
levels of digoxin or antemortem levels of digoxin?

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A. I think it has changed less to  
premortem levels. Certainly I would have concerns  
that, what does substance X do to children who are on  
digoxin.

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Q. Well, let me ask you this,  
Doctor. You have indicated in your evidence that you  
have set up certain therapeutic guidelines for dosages.  
Could you tell me again what those ranges are, please?

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A. Back in 1980 it was levels of  
1 to 3 nanograms per ml.

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Q. Okay. And are those the same  
levels that you have today?

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A. We've now changed to a different  
type of - the SI unit, so, it's a little bit lower, I  
think it is 2.5 today.

Q. And anything over that you are  
saying that you I believe would examine the clinical  
effect but that after certain levels, and I believe  
you said something about 4, 4-1/2, you still have to  
be concerned about the levels no matter what the  
clinical effect was, is that correct?





C.13

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A. Correct.

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Q. Is that a fair summarization of

4

your evidence?

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A. Yes.

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Q. So, would you agree with me,

7

Doctor, that if a particular baby had an antemortem

8

level of greater than 10, that that would be some cause

9

for concern?

A. Yes.

10

Q. And would you agree that it

11

would be well beyond the normal therapeutic range?

12

A. Correct, during life, right.

13

Q. And if a baby had this particular

14

level would you care to comment as to whether this type

15

of level is found in a therapeutic sense; in other

16

words, if a person, if a baby were receiving these

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normal dosages of digoxin, could they register that

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A. During life?

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Q. During life?

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A. Yes.

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D-1

EMTeg

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Q. How could that happen,

Doctor?

A. I think that we have seen levels of that magnitude in babies in whom there is extremely poor perfusion of their body.

We have seen it or I have certainly seen elevated levels in children with interruption of the aortic arch, where there is no kidney function or extremely poor kidney function, where there is extremely high pH - excuse me, low pH's where there is obvious on-going tissue destruction.

Q. Now if a baby were to have a high pH level -

A. I meant - I said high; I meant low. Like below 7.1 and 7.

Q. I want to pose to you a hypothetical, Doctor, of a baby having a high pH level and a normal renal function.

Now in that particular situation would you find it unusual that this baby would have a reading of greater than 10 nanograms through the giving of therapeutic dosages of digoxin?

A. Again I can't remember a patient that I am aware of that had such "terribly





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abnormal high pH" but I would still think to answer that if he has normal - if an individual has normal kidney function and had received a normal dose of digoxin and if the sampling time were correct (that is six or so hours after the digoxin level -)

Q. Yes?

A. I would say it would be unusual to see levels of 10.

Q. Of greater than 10?

A. Greater than 10.

Q. And if a person had a pH level of 6.79 would you consider that abnormally high?

A. I would consider that extremely low pH.

Q. Extremely low pH?

A. Yes. A normal pH is about 7.4. Below that is increasing level of acidosis.

Q. I see.

A. Above 7.4 is evidence of alkalosis or high pH.

Q. High pH?

A. The usual situation in sick infants is low pH or, excuse me if they are very ill with poor perfusion they have a low pH.





D-3

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Q. So they would have acidosis;

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is that correct?

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A. Yes.

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THE COMMISSIONER: I am a little

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lost. Which are you worried about to produce the  
high digoxin level? Is that the low?

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THE WITNESS: The low pH.

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THE COMMISSIONER: That is

9

where there is tissue destruction?

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THE WITNESS: Yes.

11

MR. SHINEHOFT: Q. It is my

12

understanding, Doctor, one of the key factors is the  
question of renal function, the ability to excrete -

13

A. Digoxin.

14

Q. - the body that would cause

15

the compound factor, if you want, to the question

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of digoxin levels; is that correct?

17

A. Certainly I think that

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kidney excretion is very important.

19

Q. So that would be one of

20

the first things you might wish to examine where a

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baby had a particularly high digoxin level, would  
be the renal function?

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A. I think that several things

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go through my mind almost simultaneously. One is

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time of sampling, of the digoxin vis-a-vis the time the dose is given; number two, the site from which it was taken, and finally, certainly the level of tissue perfusion and kidney function.

Q. Now assuming that these three criteria were met in terms of the proper time of the sample, the proper site at which it was taken and a particular child had a so-called normal renal function, then I gather you would be surprised if it exhibited levels of that magnitude, would you?

A. Yes.

Q. And would levels of that magnitude be as a result of the normal therapeutic administration of that type of drug, assuming that these three criteria were met?

A. I guess it could be. Again I would still be concerned even if I perceived the kidney function to be normal, I would still wonder at levels this high, is there some accumulation because of some metabolic problem or this or that.

Q. And is there-

A. - but certainly I would be concerned.







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Q. And again to restate your involvement as far as the baby Pacsai is concerned, you say that firstly you weren't there when this baby's stay was at the hospital. He was only there a short period of time, I am sure you are aware?

A. Right.

Q. Secondly, you were never involved in any meeting that was to take place to discuss this child's death; is that correct?

A. That is correct.

Q. And thirdly, that you haven't really read the autopsy reports?

A. No.

Q. So did you -

A. I know I had discussed them. I think - we sat down, those of us that were here at the hospital during the so-called epidemic period, we discussed them, but I had sort of limited my involvement in terms of the chart reviews to the patients that I was -

Q. Right, and that is fair enough. Have you had any other involvement with regard to this child that you haven't indicated so far?

A. Only indirectly in the sense





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that I did hear of the high digoxin level late the following week, but in terms of direct contact with Mr. and Mrs. Pacsai or the baby, no.

Q. Or discussion with any of the doctors that were involved in his treatment while at hospital?

A. I don't believe I did.

Q. Now lastly, Doctor, you said that your expertise is in the area of gross malformations of the heart from a pathological point of view; is that correct?

A. Yes.

Q. So would you be in a position to comment about pathology of the heart which is grossly normal but may have things like conduction problems?

THE COMMISSIONER: Can you be grossly normal?

MR. SHINEHOFT: Yes.

THE WITNESS: Yes, I think - I think so.

MR. SHINEHOFT: I believe that is the term that was used -

THE WITNESS: By Dr. Rowe.

MR. SHINEHOFT: The autopsy of





D-7

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Kevin Pacsai was that the heart was grossly normal.

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THE COMMISSIONER: I thought

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normal would be enough without being grossly normal.

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MR. SHINEHOFT: Doesn't the word

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"grossly" mean that you physically look at the heart  
as opposed to taking microscopic examination of the  
heart?

8

THE WITNESS: Correct.

9

THE COMMISSIONER: Oh, I see.

10

THE WITNESS: So one could see the

11

heart looking like a normal heart; if one took micro-  
scopy one could see signs of inflammation.

12

THE COMMISSIONER: I see.

13

THE WITNESS: And this type of

14

thing.

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MR. SHINEHOFT: Q. Right. And

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that is all the word "grossly" means?

17

A. Yes.

18

Q. When you use it in

19

autopsy reports?

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A. Correct.

21

Q. So my question to you is

22

do you feel that you have an area of expertise

23

dealing with where a heart is grossly normal but

24

there may be such things as conduction problems of

25







D-8

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the heart, things like transient adrenal insufficiency?

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A. I would have very little  
expertise in those areas.

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Q. So would it be fair that  
you would defer as Dr. Rowe has to the expertise of  
the endocrinologist and the clinical pharmacologist?

7

8

A. Yes, sir.

9

MR. SHINEHOFT: Thank you very  
much, Doctor.

10

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THE COMMISSIONER: Thank you,  
Mr. Shinehoft.

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Mr. Roland, have you any  
questions?

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MR. ROLAND: Yes, I have some  
questions.

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RE-EXAMINATION BY MR. ROLAND:

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Q. Dr. Freedom, first of all  
dealing with your awareness of the dig. levels  
concerning Allana Miller you will recall that Mr.  
Percival took you through your evidence at the  
preliminary and there you indicated you believed  
you learned about those dig. levels in the early mid-  
afternoon, and you then indicated that your  
chronology must have been wrong?

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A. That is correct.





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Q. Can you tell us why your chronology, why you can tell us today your chronology must have been wrong? What have you learned since?

A. Well, I know that the digoxin level wasn't even reported back until eight or 8:30 that evening.

Q. And then dealing with your knowledge that evening, as I understand it from your evidence you told us that you phoned in that evening at some stage?

A. Yes. Late that evening.

Q. And was it in that conversation that you learned about the Allana Miller readings?

A. Yes. I don't remember if I had the specific number or was just told it was very high, but I was told it was very high.

Q. Now turning to the issue of the sample taking or the two samples taken by Dr. Taylor in the Estrella case, you told us in your evidence that you did not know at that stage (that is when you spoke to Dr. Taylor) how he took the samples?

A. Well -

Q. Is that fair?





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A. I think that is fair. I also was under the impression or misimpression that only one sample had been taken.

Q. Yes. Let me just read to you from the transcript of Dr. Taylor's evidence at the preliminary, Volume 17, page 113, where Mr. McGee is examining Dr. Taylor.

"Q. All right. So you obtained one sample from the leg and one from the cavity below the stomach?

A. Yes.

Q. Would either of those exhibits be contaminated in any way to your knowledge?

A. Yes. The pelvic sample was most likely contaminated by edema fluid from the tissues and from ascites fluid from the cavity itself."

And he earlier had indicated that he had drawn samples with a syringe.

Now is that evidence of Dr. Taylor's consistent with your view about a sample taken in that manner? That is, it would be contaminated?





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A. Yes. I would be concerned about any sample where it has come into contact with tissue.

Q. With respect to the other sample, at page 111 of Dr. Taylor's evidence he says, in talking about how he took the other sample from the leg veins:

"One sample was obtained from blood milked from leg veins."  
Can you tell us what "milked" means?

A. My impression of what milked means is that the leg is squeezed from the foot upwards towards the groin to try and express the blood.

Q. And what is your view of whether or not such a sample would be contaminated?

A. I would be again concerned that this sample could be contaminated.

Q. And why is that?

A. Again the tissue is obviously dead tissue; the vein has been cut at the level of the pelvis, so the end of the vein is in contact with the tissue or certainly could be in contact with tissues.

Q. Now dealing lastly with Dr.







D-12

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Taylor -

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THE COMMISSOINER: I'm sorry,

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squeezing it up from the ankle I take it -

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THE WITNESS: Or from the - in

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an upward direction.

7

THE COMMISSIONER: Yes?

8

THE WITNESS: So foot, knee,

9

towards the groin.

10

THE COMMISSIONER: Yes, but where

is the tissue that you are concerned about?

11

THE WITNESS: Well, first of all

12

it is surrounding the vein, and secondly in the

13

pelvis where the vein has been cut, transected,

14

the vein would be in contact with pelvic tissues.

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THE COMMISSIONER: I have no

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doubt it makes sense. I just don't understand it.

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If you are squeezing the blood up from the bottom -

THE WITNESS: Yes.

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THE COMMISSIONER: - presumably

19

through from the knee up to the vein in the leg?

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THE WITNESS: Yes.

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THE COMMISSIONER: Are you afraid

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that the blood might somehow or other in the course

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of the squeezing operation might go right up to the

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pelvis and then become contaminated?

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D-13

EMT.

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THE WITNESS: Well again, Mr.

Commissioner, I think it would depend on how Dr. Taylor took it. I would be concerned since the vein has been transected that --

THE COMMISSIONER: Transected in the autopsy?

THE WITNESS: In the autopsy, that as the blood comes through this area in the pelvis that has obviously been cut across that the blood that comes through the vein ...

THE COMMISSIONER: Yes, I see.

MR. ROLAND: Q. And when you say that you are concerned that the sample would be contaminated in the fashion that you have described, what sort of contamination are you talking about?

A. I would think the level would be abnormally high.

Q. Now turning to your involvement with Dr. Taylor, you have told us from your information Dr. Taylor began as a resident - in resident pathology in January, 1981. We of course know that Baby Estrella died shortly into January.

Do you recall ever having met Dr. Taylor before Estrella died?

A. No. I do not recollect meeting Dr. Taylor.





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Q Do you recall ever talking to him on the phone or otherwise apart from the alleged conversation on the telephone --

A. No.

Q -- concerning Baby Estrella before that time?

A. No, I don't. I believe the holidays ended January 4th or so, and there would have just been a week before Estrella died.

Q Yes. Have you had an opportunity to look back in your records to determine if you had any professional contact with Dr. Taylor in any autopsy or any other such occasion prior to the death of Baby Estrella?

A. The last autopsy I can remember being involved with prior to after the events of January was Real Gosselin.

Q Yes.

A. Which was I believe December 18th.

MR. ROLAND: Yes. Thank you, Doctor, those are my questions.

THE COMMISSIONER: Well, Miss Cronk, I guess there is no one here from Mr. Ortved's office.

MR. YOUNG: I hesitate to speak for Mr. Ortved's office, but I understand Miss Chown just went out to use the telephone.







D.15

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Mr. Ortved has some questions and will  
be here shortly. I leave it in your hands.

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THE COMMISSIONER: You can solve the  
problem, Miss Cronk, by saying you are unprepared, and  
you would like a few minutes.

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MS. CRONK: I would at least like a  
few minutes to think about that.

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THE COMMISSIONER: Yes, all right.

9

MS. CHOWN: Thank you, Mr. Commissioner.  
Hot from the phone here Mr. Ortved is on his way. When  
I indicated he was on deck he is at another matter, but  
he has indicated he can be here in about five or ten  
minutes. He has a very short few questions for  
Dr. Freedom; perhaps five minutes.

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If Miss Cronk would like to go ahead  
he will have no objection if she doesn't to either  
following her or interrupting if that would be  
convenient.

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MS. CRONK: May I simply suggest we  
take our morning break early because we have a similar  
problem with Mr. Tobias.

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THE COMMISSIONER: Yes, but if Mr.  
Tobias arrives then I have to go back and let Mr. Roland  
go on again. Well, I guess the consensus is we will  
have our break.  
--- Short recess.





1 --- On resuming

E/DM/ko

2 THE COMMISSIONER: Mr. Ortved, I can  
3 see you, and I am not too sure that I want to hear  
4 from you yet. So if you will just sit down for a  
5 moment, because Mr. Manning you are here, do you wish  
6 to cross-examine?

7 MR. MANNING: I have a couple of  
8 questions.

9 THE COMMISSIONER: Yes, would you do  
10 that, please.

11 MR. ORTVED: Mr. Commissioner?

12 THE COMMISSIONER: Yes, Mr. Ortved?

13 MR. ORTVED: Mr. Commissioner, I have  
14 a Mr. Armstrong who is desperately awaiting my re-  
15 appearance at a discovery.

16 THE COMMISSIONER: Well, you can do  
17 that and I don't mind you are examining now, certainly.  
18 I just tell you that your position is normally in  
19 reply, and re-examination and you will lose that  
20 opportunity.

21 MR. ORTVED: I appreciate that. I  
22 have spoken to Mr. Manning and he has no objection if  
23 I were to go now.

24 THE COMMISSIONER: He couldn't  
25 possibly have any objection because that gives him  
the last word.





1  
2 MR. MANNING: That is right, but you  
3 might lose something.

4 MR. ORTVED: I am agreeable to take  
5 that risk if you, Mr. Commissioner, are agreeable.

6 THE COMMISSIONER: Yes, all right, if  
7 you will proceed then.

8 RE-EXAMINATION BY MR. ORTVED:

9 Q. Dr. Freedom, I just have a very  
10 few questions of you, and my first area of re-  
11 examination is in relation to baby Estrella.

12 You indicated in cross-examination by  
13 Mr. Percival, and it is on page 5630 of Volume 30,  
14 that in answer to a question on the part of  
15 Mr. Percival as to whether having regard to Janice  
16 Estrella pre mortem digoxin readings, and the fact  
17 that they appeared to be coming down in the period  
18 prior to January 11th to the point where the level  
19 was at 4.7 I believe on January 11th, that it would  
20 be your expectation that that level would continue to  
21 come down were there no more digoxin administered.  
22 Do you recall those questions?

23 A. Yes, I do.

24 Q. And specifically your answer at  
25 page 5631 was to the effect:





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1 "I think depending upon her level of  
2 metabolism and excretion, yes."

3 So the way I interpreted that you were  
4 including a qualifier, namely depending upon that  
5 child's metabolism and her level of excretion, correct?

6 A. That is correct.

7 Q. And insofar as Janice Estrella  
8 was concerned specifically, can you assist the  
9 Commissioner as to whether or not you might have had  
10 reservations about that child specifically in terms of  
11 her metabolism and level of excretion?

12 A. Well as I said I had nothing to  
13 do during her life with her care. On reviewing for  
14 this Commission I see that she did have a fluctuating  
15 renal function on January 6th, 1980. She had been  
16 given lasix because her output was reduced and that  
17 she had no effect. She had an elevated BUN, I am  
18 sorry Mr. Commissioner, I don't have that chart in  
19 front of me, in January, of 19. Again this was a  
20 child, or an infant where she was not having great  
21 nutrition so a BUN of 19 was certainly abnormal and  
22 would reflect, in my opinion, some change in her  
23 kidney function.

24 Q. Could I have Exhibit 91, do you  
25 have that hospital record before you Doctor?

A. Yes, I do.







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Q. If I could just, Dr. Freedom, have you turn to page 10 of that record, that is the second page of what is given to be the final autopsy report on Janice Estrella. Is there anything there that would indicate any problem with the child's kidney function?

A. Well again No. 11, certainly it is my understanding, although I am not a kidney expert in children, that if a kidney has multiple cysts throughout it the function can be impaired, both acutely and chronically.

Q. So then I understand you have already had read to you the evidence of Dr. Taylor as to how the sample from the leg vein was obtained. Depending on the contamination of that sample, what is your view as to whether there is any possibility of the level in that child's blood rising absent contamination?

A. During life?

Q. Yes.

A. Again I would think that if the child's kidney function were impaired, or the state of cardiac output was impaired, then I think it could rise during life.

THE COMMISSIONER: That is even without





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any dosage?

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THE WITNESS: Yes.

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A. Yes, not just in the hospital but in the literature I have seen, a report, and I don't think I have it with me, of a person given digoxin having kidney problems where the digoxin was held and over the next few days it still increased.

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Q. Then the next area I want to re-examine on is in relation to the, to your communication to the Police concerning the possibility of contamination which was reviewed with you by Mr. Percival.

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If I can take you, if you will, to the period March 22nd, March 23rd, March 24th, 1981, did you meet with members of the Police Department in that period of days?

A. Yes.

Q. And was the subject of the digoxin level obtained in relation to Janice Estrella discussed?

A. Yes.





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Q. And could you just tell the Commissioner what your perception was as to that level, as of March 22nd, 23rd and 24th?

A. I thought it was very high, and I can't remember whether I mentioned it to the Police. I know I mentioned it to the Crown that I was concerned about possible contamination.

Q. You have told us in your evidence on more than one occasion your perception of that level when advised of it by Dr. Taylor?

A. Right, that I thought back in January it was an artifact or decimal error, or contaminated in the way it was taken.

Q. Now was that similarly your view upon learning of the events of, in particular, March 21st and the level returned in relation to baby Miller?

A. I don't think so. Again I was sort of bombarded with the Pacsai number, with the Miller number, and all of a sudden Estrella seemed to carry greater weight.

Q. Then what was your understanding and information that the Police did upon attending at the hospital on Sunday morning, March 22, 1981?

A. Again, Mr. Ortved, I wasn't there, but I understand they were enquiring about





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digoxin and these levels.

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Q. Do you know whether in fact they reviewed the charts of the four babies in question?

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A. Yes, it is my understanding they did look at the charts at that time.

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Q. At whether or not it was raised by you, or any of the other doctors as to whether there was an issue of contamination in relation to the Estrella sample, if I can ask you to turn to page 12 of the Estrella hospital record, Exhibit 91.

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As is set out in the last paragraph of that page, that the samples were slightly contaminated.

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A. That is correct.

Q. If I could also ask you to refer to page number 29 of that hospital record, is that the page of the document which you understand is completed at the time that the autopsy is undertaken?

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A. It is my understanding, Mr. Ortved, that this form is completed at the time the final autopsy is signed out.

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Q. And can you just read with me the entry at the bottom of that page, does it read:

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"Digoxin level (contaminated specimen)  
72 nanograms per millilitre."?

A. Yes, it does.







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Q. And so whether or not it was raised by the doctors, certainly the fact that these levels may be specious was evident from the chart, correct?

A. Yes.

Q. And you mentioned in your evidence already that the possibility of contamination was discussed with the Crown, is that the meeting to which you were referred by Mr. Percival at which I was present with Mr. Magee and Mr. Wiley?

A. Yes.

Q. Then the only other matter I wish to ask you about is the transcript and the tape that were referred to by Mr. Percival and entered as exhibits last week. Do you have Exhibit 170 please Mr. Elliot?

Now I just want to be clear, Doctor, does that transcript that was tendered last week contain the entirety of your interview with Miss Hawkins for the Canadian Broadcasting Company?

A. No, it does not.

Q. Can you just detail for the Commissioner how that interview came about and in particular the excerpt therein came about?

A. I had gotten a number of calls





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from this individual to my office.

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Q. This individual being whom?

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A. Again I didn't remember the name  
Mr. Ortved, until last week, that it was Nancy Hawkins.  
I spoke with Mr. Ken Rowe of the Hospital  
Administration and he felt that perhaps I should say  
something, because she kept calling over and over  
again to my office.

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When I finally did contact her on the  
phone she asked me about this apparent disparity  
between my recollection, or lack of recollection of  
Dr. Taylor's phone call, and Dr. Taylor's evidence  
that he had called me. I told her that I had no  
memory of that phone call. That in early January I  
don't believe I knew who Dr. Taylor was and that it  
was certainly conceivable, because he is an honourable  
man, that in the middle of a sleep on a Sunday morning,  
when I was sleeping in, he called; that I didn't know  
that he was a pathology resident and whatnot, and I  
suggested in a foggy conversation that he draw a level  
on Estrella. And even in my semi-awake state not  
realizing she was dead. I said that is certainly one  
way to resolve the fact that Dr. Taylor said that he  
called me, I just don't have any recollection.

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Q. And so the portion that we heard

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last week and which is contained in the transcript which has been filed as an exhibit, was that excerpted from your longer interview?

A. Yes.

Q. And do you feel that that excerpt fairly represents the entirety of your interview?

A. It does not at all.

MR. ORTVED: Those are my questions, Mr. Commissioner.

THE COMMISSIONER: Yes, all right, thank you.

MR. ORTVED: Thank you.

THE COMMISSIONER: Mr. Manning?

CROSS-EXAMINATION BY MR. MANNING:

Q. I noticed in the transcript of your evidence given last Thursday, Doctor, that in answer to a question from Mr. Scott you were asked the following question and gave the following answer, and I will start back so you get the context.

THE COMMISSIONER: What is the volume please?

MR. MANNING: This is Volume No. 30.

THE COMMISSIONER: Page?

MR. MANNING: Page 5573, at approximately line 23:





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"Q. Well can I go further and suggest to you Doctor that if you did consider digoxin poisoning in that case you might be a terrific detective but you would be unscientific?

A. Correct.

Q. There would be no evidence for it?

A. Correct.

Q. Now dealing with those cases where there is evidence on the record that there has been digoxin administered what do you do when you come to consider that as a potential cause under those circumstances?

A. Again I think that one reviews the digoxin dosage as ordered in regards to the patient's weight, the timing of the digoxin administration vis-a-vis the child's death, the level of kidney function and of course whether or not a digoxin level has been obtained."

Who is to consider that Doctor, in your opinion? Whose function was it to do that?

THE WITNESS: I think that would be at several levels depending on who was viewing the chart







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the time; the resident, the fellow, the staff  
cardiologist and perhaps a pathologist.

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MR. MANNING: Q. Would you consider  
that that was part of your function in reviewing any  
of these matters?

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A. Yes, I certainly included the  
staff pathologist.

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Q. You yourself reviewed the  
material with respect to the Murphy child?

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10

A. Excuse me?

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Q. The documents?

12

A. Gary Murphy or Paul Murphy?

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Q. Paul Murphy.

14

A. I can't remember when I  
reviewed the data Mr. Manning, but I certainly have  
looked over that youngster's chart.

15

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Q. And Real Gosselin?

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A. As I said in testimony, I was  
embarrassed when I dictated my letter that I had not,  
because the chart itself addressed the fact that - I  
was not aware of all the findings in the chart until  
some time after that youngster died.

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Q. Is that the only kind of letter,  
or the only letter of its type that you have ever  
written?

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A. No. As you know from evidence at this hearing I try to write letters on most of my patients.

Q. Would you agree, Doctor, that if you know that a patient had a heart problem, or was on a cardiac ward and was being given digoxin and a diuretic as well, and you knew nothing more about the patient, but you saw symptoms of vomiting, or confused state, or giddiness, or increased secretion of urine, what would be your first diagnosis given those limited facts?

A. That you had a sick youngster.

Q. What would be your diagnosis?

A. I think one would have to go through a whole list of things.

Q. Would you be concerned about the possibility of digoxin toxicity?

A. I would be concerned about it if I felt the dosage of digoxin was inappropriate for the youngster's weight; if there had been a serum level taken; if I felt that there were no other obvious explanations for these events, or findings.

Q. Would you not want to rule out digoxin toxicity as your first diagnosis?

A. No, not necessarily.





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Q. It would not be --

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THE COMMISSIONER: I am sorry I don't know, the question was would you rule out?

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MR. MANNING: Q. No, would you not want to rule out --

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A. As your first --

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THE COMMISSIONER: Yes, as your first, all right.

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THE WITNESS: I think it would be involved in the overall review but I would look for these other factors as well.

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MR. MANNING: Q. Would that not be your most obvious diagnosis given those limited number of facts?

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A. No.

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Q. You would agree, would you not, that all digitalis preparations have comparably low margins of safety?

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A. Yes.

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Q. And that all can cause similarly toxic reactions?

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A. Again, Mr. Manning, the one that I have used for most of my academic life is the standard preparation of lanoxin, so I can't address all the others which I have not used.





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Q. Let us talk about lanoxin then, would you not agree that it can cause a severe toxic reaction?

A. Yes.

Q. Regardless of the dosage?

A. No, I would disagree with that.

Q. Have you never had an instance, Doctor, where regardless of the dosage there was signs of digoxin toxicity?

A. No, I can't remember where regardless of the dosage I have had signs of digoxin toxicity.

Q. Are you aware of any literature which indicates that notwithstanding a low dosage of lanoxin there can still be toxicity?

A. Yes, I am aware of such literature.

Q. And that literature is not recent?

A. Correct.

Q. Notwithstanding that you would not, viewing a child, given those limited facts that I posed to you before, immediately look to digoxin toxicity as your first diagnosis?

A. No, I wouldn't look at it as my







1  
2 first, it would be considered in the overall context  
3 of the youngster.

4 Q. Would you agree then that if  
5 you wouldn't look at it as a first it would be an  
6 obvious diagnosis to be considered?

7 A. I would agree that it could be  
8 considered in the context which you have given me.

9 Q. There may be digoxin toxicity  
10 notwithstanding the fact there is a low level in the  
11 blood, low reading?

12 A. I am not sure how low you would  
13 want a reading to be Mr. Manning before you got signs  
14 of digoxin toxicity.

15 Q. How about one?

16 A. I think it would be most unusual  
17 to see a child with toxicity with levels in that range.

18 Q. But if you had a child exhibiting  
19 those symptoms, and you knew nothing more than the  
20 child was on digoxin and no other drug, what would be  
21 your most obvious diagnosis?

22 A. That the child had medical  
23 problems to account for those symptoms that you  
24 mentioned.

25 Q. And not digoxin toxicity  
accounting for those symptoms?





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A. I would think I would explore, as I said already, the dose of digoxin in relationship to the patient's status, kidney function, and if I felt the dose to be appropriate, that I would consider it unlikely.

Q. You indicated earlier in your testimony that with respect to the appropriate digoxin level the dilemma in effect was whether to treat the number or the patient?

A. Correct.

Q. And you indicated also that 1 to 2.5 was the guideline and 1 to 3 was the appropriate level?

A. I don't think that is quite right. I said 1 to 3 used to be the therapeutic guideline, we have now gone to the new SSI units where it is a little lower, 1 to 2.5.

Q. And some children require more digoxin?

A. Correct.

Q. Do some require less?

A. Yes.

Q. Under what circumstances?

A. I think the classic type of disease where one would be cautious in giving digoxin





1  
2 are in those children that have inflammatory diseases  
3 of the heart muscle, so-called myocarditis; some  
4 patients with endocardial fibroelastosis; and certainly  
5 those with impaired kidney function.

6 THE COMMISSIONER: When you say  
7 cautious you mean you don't, is that it, you don't  
8 recommend digoxin at all?

9 THE WITNESS: No, I think if it has  
10 to be used, Mr. Commissioner, one would have to adjust  
11 the dosage appropriately.

12 MR. MANNING: Q. You reviewed the  
13 charts and the medical records and the anatomies of  
14 the individuals that were dying in the period of July  
15 through to December, and you came to the conclusion  
16 that because of there being more babies that were, if  
17 I can put it this way, sicker and younger, that that was  
18 ample and adequate reason for the babies' death?

19 A. And in the few cases that I was  
20 involved with and my other colleagues where we had  
21 concerns the coroner had been called.

22 Q. Leaving those cases aside, this  
23 was the reason that you ascribed to the increase in  
24 the number of deaths, correct?

25 A. Yes.

Q. Did you do this on your own, or





1  
2 in consultation with Dr. Rowe?

3 A. I think that again we had  
4 meetings every day, so we discussed the children every  
5 day. I think it is hard for me to separate out whether  
6 it was solely my perception or the overall global  
7 group of cardiologists.

8 Q. And this was the perception  
9 held throughout the entire period of time?

10 A. Yes, that would be my under-  
11 standing and my belief.

12 Q. And no active steps were taken  
13 to prove that theory as it were, that was the  
14 underlying assumption that you proceeded on for a  
15 period of months?

16 A. Yes.

17 Q. Now you viewed the chart of  
18 Paul Murphy and the progress notes seem to indicate,  
19 among other things, from August 19th through to  
20 August 23rd the child exhibited the following symptoms:  
21 nausea, confused state, confusion on awakening,  
22 vomiting, confused state, and then he died on August  
23 23rd?

24 A. That is correct.  
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Q. Are those symptoms not symptoms one finds described in standard textbooks as the obvious signs of digoxin toxicity?

A. I think that certainly one can find those findings in digoxin toxicity. However, with Paul, he had a digoxin level of 1.8 on admission, he was an end stage heart failure, he was hypoxic, he was having movement disorders and at least on one previous occasion, on June 25th, he was not responsive. I would think those medical reasons are certainly adequate enough to give all the symptoms as you have just described.

Q. So is digoxin toxicity as stated in the standard textbooks?

A. Again though, Mr. Manning ---

Q. Is that not so?

A. Mr. Manning, again, as I have suggested, when he came in he was having all of these findings, his BUN was elevated and yet he had a digoxin level on August 19th that was within the therapeutic range.

Q. Notwithstanding the level of the digoxin, the reading of the digoxin, the symptoms fell within the classic symptoms of digoxin toxicity, did they not?





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A. If you took the symptoms as you listed just in isolation without interpreting them in the context of Paul, I would have to say yes.

Q. Now, interpreting them in the context of the fact the child was on digoxin as well.

A. Yes.

Q. You would also have to say yes?

A. No, I wouldn't.

Q. Why not?

A. Because he was a sick dying boy that was grossly hypoxic. He had massive ascites, he was confused. All of this, Mr. Manning, was when he had a digoxin level that was within the therapeutic range. So that I felt at that time that his symptoms were not explained by digoxin but were explained by his terribly ill state.

Q. So, you then at that time did consider whether or not his symptoms were caused by digoxin toxicity, is that what you are saying today?

A. No, I am not. I'm saying that as one sees, as one saw this youngster and saw how terribly ill he was, we assessed him from top to bottom with chemistries and I don't believe digoxin intoxication ever came into consideration because we had the level of 1.8 and we had seen Paul over the





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preceding few months in the Hospital.

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Q. Did you know what medication he

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was on?

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A. Yes.

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Q. Did it ever occur to you or to

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anyone else at the time to consider for a moment that  
the medication might be causing him some problems?

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A. Yes.

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Q. And what was done about it?

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A. I believe at least on one previous

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admission they had held his medication.

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Q. Which medication?

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A. I believe both digoxin and

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diuretics.

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Q. Because of the problems they

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were causing?

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A. No, because of the concern that

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perhaps they were causing the problem.

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Q. Right. But that wasn't done in

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this case?

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A. Correct.

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Q. Any reason for that?

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A. This boy was terribly uncomfort-

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able with ascites. If we didn't give him his medicine  
he wouldn't excrete and we felt that with the level of

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1.8 that we felt comfortable in pursuing with the  
medications.

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Q. On a previous occasion he was  
uncomfortable as well, was he not?

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A. The difference though,  
Mr. Manning ---

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Q. Was he not?

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A. The difference though, Mr.  
Manning, was that he had had problems with very low  
sodiums and that governed I believe the concern of  
the physicians back in June.

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Q. But on the previous occasion he  
had had problems and the digoxin was withheld?

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A. Again, I would have to ---

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A. I would have, Mr. Manning, to  
have the chart in front of me to go through page by  
page to see if that statement is correct. It is my  
understanding but I don't remember that we held it  
during his last admission. So, I would just have to  
have the chart in front of me.

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Q. All right. Doctor, at some time  
prior to the last admission he was exhibiting  
difficulties and his digoxin was held ---

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A. I believe so.







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Q. --- to your knowledge?

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A. Well, as I said, Mr. Manning, I believe so but I would just have to say I would have to have the chart. If you would like me to address that issue at lunch I will be pleased to do so.

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Q. All right.

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THE COMMISSIONER: Well, I am hoping at some time to send you back to the Hospital.

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THE WITNESS: I share that hope, sir.

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THE COMMISSIONER: All right.

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MR. MANNING: Q. Was any consideration given to the interactions of any of the drugs he was on?

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A. Again, in most children they are on combination drug therapy, digoxin, quinidine and we do have those concerns. I don't remember specifically Mr. Manning, if we had that concern with Paul Murphy.

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Q. Dr. Rowe suggested that he died in ventricular fibrillation. Are you aware of that?

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A. Yes.

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Q. And that is a common symptom of digoxin intoxication?

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A. In isolation, yes.

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Q. Yes. Taken with all the others?

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A. Yes.

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Q. It must be taken together?





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A. Correct.

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Q. There was no check for digoxin toxicity, to your recollection?

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A. Well, again, he had a level on admission of 1.8.

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A. And we had cardiograms.

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Q. Notwithstanding the checking of the level and notwithstanding your previous testimony that sometimes the problem is whether to check the patient or the level, you just checked the level and having seen the level was within what you considered to be therapeutic range, that ended the inquiry as far as you were concerned and as far as digoxin intoxication?

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A. No, I don't think that's quite fair.

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Q. Well, what happened?

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A. I'm sorry?

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Q. What happened?

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A. Again, I think as one looked at this youngster and saw how terribly oedematous he was, one made the clinical judgment to pursue with the medications.





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Q Did you make a judgment to pursue with the medications notwithstanding the symptoms he was exhibiting?

A Yes.

Q All right. So, it may have occurred to you or to some of your colleagues at the time that while those symptoms may have been digoxin or symptoms of digoxin intoxication, it was far better to administer the drug than to hold it?

A I don't believe there was any concern, at least on his last admission, that he had digoxin intoxication.

Q Speaking of concern, you were not concerned with respect to the Gosselin baby as well, correct? You were not concerned that the digoxin contributed to the death?

A Again, the Gosselin infant had had a level of 3.7 I believe and the digoxin was held for those 24 hours prior to his death.

Q Do you know if anyone reviewed the hospital record in order to see if something had been missed at the time?

A As I said, I wish I had reviewed it. I subsequently reviewed it and I don't think anything was missed.





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Q. And the admission on December 17th was with a level of 3.7?

A. Yes.

Q. And the progress notes and discharge notes say 3.9.

A. That's true.

Q. That's above the therapeutic level?

A. Yes.

Q. Are you aware of any active steps that were taken in order to bring that level down other than the withdrawal of the digoxin?

A. I think that is the most appropriate course.

Q. Is there any other course?

A. I wouldn't think so in a child that received digoxin some hours before its transport to Toronto.

Q. No other drugs that could have been administered to the child to bring the level down?

A. I don't think one needed other drugs as I reviewed the chart.

Q. Are there any other drugs that could bring the level down?

A. I am not aware of a drug that you could give to bring a digoxin level down.

MR. MANNING: No further questions.







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THE COMMISSIONER: Yes, thank you,  
Mr. Manning.

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Mr. Tobias?

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MR. TOBIAS: I have no questions of  
this witness, Mr. Commissioner.

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THE COMMISSIONER: All right, thank you.

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Mr. Roland?

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RE-EXAMINATION BY MR. ROLAND:

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Q. Yes, Dr. Freedom, Mr. Manning  
asked you questions concerning Paul Murphy based on  
two assumptions that the patient was on digoxin and  
on diuretics and you know nothing more about the  
patient except that he was exhibiting symptoms of  
vomiting and confusion and so on. That is an  
interesting hypothetical. Does that have any real  
application to any of the cases, Paul Murphy or any  
of the others, in the real world of the Hospital?

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A. No.

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Q. Because I take it that people,  
both the medical staff and the nursing staff know much  
more about the patients than simply two isolated facts?

A. Correct.

Q. And that there are charts and  
other things to refer to in the Hospital to determine  
all of these other factors about the patient?





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A. Correct.

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Q. And there is ongoing knowledge

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about the patient by both the medical staff and the

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nursing staff in the treatment of the patient?

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A. And especially someone like Paul

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that we have taken care of for a number of years.

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Q. And you have told us that the

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decision was made with respect to Paul Murphy to

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continue to provide him with digoxin during the time

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that he was in the Hospital. Was that important for

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the care and treatment of Paul Murphy?

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A. Yes. This youngster sadly was

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terminally ill. No further surgery could be offered

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him. He was not a candidate at that time for any form

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of heart and lung transplantation. He had spent

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considerable time in the Hospital. He voiced always

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to us that he wanted to be home and we felt that we

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would try and make him comfortable and I believe I

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said in my admission note to get him home as soon as

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possible.

Q. All right. And you said that

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there were also cardiograms of Paul Murphy?

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A. Yes.

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Q. What role did they play in the

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issue of digoxin?





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A. Again, one looks to see if there are rhythm disturbances on the electrocardiogram that one could attribute to digoxin intoxication. One looks for serial changes in the electrocardiograms over his many admissions.

MR. ROLAND: Thank you. Those are all the questions I have.

THE COMMISSIONER: Thank you.

Miss Cronk?

MS. CRONK: Thank you, Mr. Commissioner.

RE-DIRECT EXAMINATION BY MS. CRONK:

Q. Dr. Freedom, I will try to be brief, you have been very co-operative in your evidence to date.

You will recall, Dr. Freedom, that a number of times both in your examination in chief and during the course of re-examination you indicated that in March of 1981 you were convinced that a number of the children whose deaths the Commissioner is concerned with came to their deaths by virtue of murder. Do you recall that evidence?

A. Yes.

Q. You indicated further as I recall it that your opinion at that time was based on the digoxin levels which were obtained and the readings obtained for those children.





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A. Correct.

Q. Do I take it correctly,

Dr. Freedom, that where both an elevated antemortem digoxin level and an elevated postmortem digoxin level were obtained, that you were relying in that regard on both the antemortem and the postmortem levels in reaching that conclusion?

A. Not entirely in the sense that I guess in March of '81 and shortly after the events of that weekend I attributed, as we all did, a lot to Estrella's level of 72. If I had just been told that Estrella's level was 4.7 to 7 I don't think I would have had the type of concern that I did at that weekend.

Q. Well, I understand your evidence

A. So, it is that kind of level.

Q. I understand your evidence on that, Dr. Freedom, and perhaps I was unfair. I wasn't restricting my question to the Estrella child only.

A. Okay.

Q. For example, when you reached that conclusion, as I understand it at that weekend of March 21st and the events of March 21st, on the next day, on the 22nd, you learned of the antemortem reading on Justin Cook that had been obtained as well







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as the postmortem reading that had been obtained for  
Justin Cook, as I understand it.

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A. Yes.

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Q. And similarly on your return to  
the Hospital in mid-March, approximately 18th of March,  
you have testified that you learned of Kevin Pacsai's  
antemortem digoxin readings as well as his postmortem  
readings, is that correct?

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A. No, I believe I had been informed  
that Pacsai had a high level. I'm not sure whether I  
was told it was pre mortem or ante mortem, just that  
it was a very abnormal level.

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Q. All right, I see. Well, in the  
instance then, and let's deal with Justin Cook, where  
you were informed I take it both of the antemortem  
and the postmortem level.

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Q. Do I take it correctly that in  
reaching the conclusion that a number of these  
children, specifically having the conviction that  
Justin Cook had been murdered, that was a conclusion  
you drew in the context of your knowledge both of the  
antemortem and the postmortem level?

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A. Yes.

Q. All right. Now, Doctor, again,





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dealing with the March, 1981 time frame, was there at that time, or did you at that time in reaching that conviction make any observation that there was a similarity in the particular combination of terminal events that these children were sustaining that was part of your judgment in concluding that it was likely they had been murdered?

A. I don't think so. I think it was the feeling that if Miller, and again, I had understood that no further digoxin had been given on Miller when I made the comment late on the Saturday evening and, again, I hadn't reviewed all the charts like I did after the events. I guess what went through my mind that weekend was that if Pacsai had a high level, Miller went from .6 to sky high and Cook, could the other babies have met their death the same way.

Q. All right, Doctor. Well, as I understood your evidence during the course of re-examination by Mr. Percival, you indicated, as you have told us, that that was the opinion or the conviction that you reached in March of '81?

A. That's correct.

Q. And that was as well your conviction and opinion at the time that you testified





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in the preliminary hearing concerning Susan Nelles  
and your testimony in that regard was in February?

A. Correct.

Q. Of 1982?

A. Correct.

Q. All right. Now, at that time,  
over the course of those months, Doctor, in reviewing  
the charts and the medical records of these children,  
did you note or observe at that time that there was  
a similarity in the terminal events or the agonal  
events being sustained by these children that you  
considered significant in forming that conviction?

A. I have a little difficulty  
answering that in the sense that if I had not known  
about those levels I would have felt they were dying  
or the youngsters had died from their congenital heart  
malformations and their subsequent course. I think  
all of us were concerned that after the events of  
March of 1981 that could digoxin have been implicated.

Q. All right. Well, Doctor, at the  
time that the review of these medical records was  
undertaken and prior to your testimony at the  
preliminary hearing, as I understand it, at least in  
the case of Justin Cook, you have told me you were  
aware of the antemortem levels and postmortem levels?











F.16

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A. Right.

3

Q. And you were aware that the

4

Pacsai levels were high?

5

A. Right.

6

Q. My question to you is simply

7

this. In reviewing the records and the terminal events  
sustained by these children, was that another factor

8

that you considered significant in reaching your

9

conclusion that these children had been murdered. Was

10

that something that you considered unusual, the

11

similarity of these terminal events?

12

A. No.

13

Q. All right. Was there anything

14

then, Doctor, that you observed or noted in undertaking

15

the review of those records as to the frequency with  
which this particular combination or combinations of

16

terminal events was occurring that struck you as

17

unusual?

18

A. Could you be a little more

19

specific? What frequency of what events?

20

Q. All right, Doctor. We have

21

spoken and you have given evidence both in cross-  
examination and in chief as to those - my word

22

originally - symptoms --

23

A. Yes.

24

25





F.17

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Q. -- which are consistent with

3

digoxin intoxication?

4

A. Yes.

5

Q. So, in the situation of a child

6

who at the time of death manifested bradycardia, ECG

7

changes, arrhythmias, some situations ventricular

8

fibrillation, you added to the list, as I understand

9

it, of potential symptoms increased lethargy,

10

vomiting, those kinds of events?

A. Yes.

11

Q. You have told me a few moments

12

ago that there was nothing in the similarity of those

13

events that were being experienced by a variety of

14

these children during the epidemic period that you

15

considered to be unusual?

A. True.

16

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G/EMT/ko

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Q. Was there in the recurring frequency of deaths of that kind anything which you felt to be unusual?

A. No.

Q. Thank you, Doctor. You have told us as well, Doctor, that although your opinion both in March of 1981 and at the time of testifying at the preliminary hearing was that a number of these children had been murdered, your conviction in that regard was altered and as I understood your evidence sitting here today, that perception, that opinion, has been altered.

As I understood your evidence, that was in part as you explained as a result of your continuing expanding knowledge as to the implications of post mortem digoxin levels and the workings of the drug digoxin itself?

A. Correct.

Q. And do you recall as well an exchange with Mr. Ortved during cross-examination, Dr. Freedom, in Volume 30, Mr. Commissioner, at page 5595.

To be fair, Doctor, perhaps I can give you the full context.

Mr. Ortved asked you, beginning at page 9:





1

2

"I think that you have --"

3

THE COMMISSIONER: Page 9? Line 9?

4

MS. CRONK: I am sorry, line 9, page

5

5595. Sorry, Mr. Commissioner.

6

Q. Mr. Ortved asked you:

7

"I think that you have already

8

indicated, in your evidence-in-chief,

9

that in the course of time and I am

10

speaking specifically of March, 1981,

11

through until today, there has been a

12

change, or an alteration, on your part

13

as to the possible cause of death in

14

relation to certain of these children,

15

would that be fair?

16

A. Yes. I was certainly very

17

convinced in March of 1981, being

18

told about those high digoxin levels,

19

that unequivocally, I felt, back in

20

those days, it was murder.

21

Q. Has that perception altered as

22

of September the 8th, 1983?

23

A. Yes. I think all of us in this

24

room have learned a great deal about

25

digoxin. Certainly, my understanding

of a postmortem digoxin level in 1981







1

2

"was that it carried the same signifi-  
cance as a premortem level, I have  
learned otherwise."

3

4

5

Stopping there for a moment, Doctor,  
was that an understanding that you had in January of  
1981?

6

7

THE COMMISSIONER: Sorry, which one?

8

9

MS. CRONK: Q. That a postmortem  
digoxin level had the same significance as an ante-  
mortem level?

10

11

A. I think so. Again I can't  
remember over the last two and a half years when I  
have accumulated these facts and interchange. I  
believe as of the preliminary hearing I was not as  
well versed in all the changes of digoxin as I have  
been the last 18 months.

12

13

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16

Q. All right, Doctor. Continuing  
at page 5596 of the transcript:

17

18

"Q. There is reference that has been  
made, in this forum, to the case of  
Baby Murphy, who died earlier this  
year, you are aware of that, I take  
it?

19

20

21

22

A. Yes.

23

Q. And as I understand it, you had

24

25





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"some very close personal contact with  
that particular case, did you not?

3

4

A. Yes, I was Ward Chief and Acting  
Director of the Division when the baby  
died.

5

6

7

Q. And did the experience and the  
evidence that you heard and gave in  
relation to Baby Murphy, is that one  
of the mileposts in terms of your  
continued learning about digoxin and  
its effects postmortem?

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A. Yes. I, certainly that evening,  
or I guess it was early in the morning  
when we received a digoxin level in  
the 20s and 30s on Gary Murphy, and  
as we then went through the next few  
weeks, the coroner's and homicide  
investigation, finally to have it  
declared through the coroner's  
investigation that these levels were  
that of a natural cause, certainly would  
shade any of my concerns back to March  
of 1981. Take, for example, Pacsai,  
whose level, as I recall, was somewhat  
slightly lower and in the same range  
as the Murphy baby."





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Do you recall that evidence, Dr.  
Freedom?

A. Yes.

Q. Gary Murphy, as I understand it,  
Dr. Freedom, had been admitted to the Hospital for  
Sick Children a number of times. The first shortly  
after his birth, but the date of his last admission  
with which perhaps we can concern ourselves was March  
27, 1983. Is that correct, Doctor?

A. I don't have the chart in front  
of me, Miss Cronk, and I just wonder if I have my  
notes with me.

Q. Perhaps I can help you, Doctor.

As I understand it the medical record,  
the full medical record for Gary Murphy is a two volume  
record. The first volume which is quite lengthy  
pertains to his earlier hospitalization. Based on my  
review of the record the second volume pertains to his  
last admission to the hospital following which he died.

I propose, Mr. Commissioner, to show  
Dr. Freedom volume 2 of that record.

THE COMMISSIONER: Yes. We have not  
received them. They are not exhibits yet. All right.

MS. CRONK: Not yet, sir.

THE COMMISSIONER: Shall we make them





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an exhibit now? What number would this be?

MS. CRONK: Q. Dr. Freedom, can you help us, do you recognize that copy as a copy of volume 2 of Gary Murphy's medical record pertaining to his last admission to the Hospital for Sick Children?

A. I think so. I would have to look through it but I presume it is.

Q. Take a minute, sir, and just note the date of admission.

THE COMMISSIONER: We may be in a bit of trouble if you don't recognize it, so before we make it an exhibit I think you had better ...

MS. CRONK: Q. Can I direct you, sir, to page 33, for example, of the medical record?

A. Yes.

Q. Which contains the discharge report and it shows an admission date?

A. Yes.

Q. For Gary Murphy of March 27, 1983, and a death date, discharge of April 23?

A. Yes, I do recognize it, Mr. Commissioner.

THE COMMISSIONER: All right. That will be Exhibit 172.







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2

--- EXHIBIT NO. 172: Medical Chart of Gary Murphy.

3

MS. CRONK: Q. I take it then,

4

Doctor, stating again at page 33 of the discharge

5

report to assist you, that the date of his last

6

admission to the hospital was the 27th of March, the

7

date of his death the 23rd of April; is that correct?

8

A. Yes.

9

Q. Of 1983?

10

A. Yes.

11

Q. And during that entire period of

time he remained in the Hospital for Sick Children and

12

was not released or transferred to another hospital?

13

A. That is my understanding.

14

Q. You told us, Dr. Freedom, that

during the course of that last admission of Gary Murphy

15

you were both ward chief and acting director of the

16

division when he died.

17

Can you help me just as a matter of

18

interest what you mean when you describe your situation

19

at that time as being acting director of the division?

20

A. Yes.

21

Q. Was Dr. Rowe out of town?

22

A. I believe both Drs. Rowe and

Fowler were both out of town.

23

Q. And if we could stay then, Doctor,

24

25





1

with the discharge report?

2

3

A. Yes.

4

Q. For a moment, and in the first paragraph of the discharge report as I understand it, the history of the child is set out in brief. It indicates:

5

6

7

"This five month old infant is well known to the cardiology department from his previous admission to ward 7G and 7F shortly after birth."

8

9

10

That I take it, Doctor, refers to his prior admission; not on the cardiology wards but on the neonatal wards following his birth?

11

12

13

A. Correct.

14

15

Q. And the discharge report continues:

16

17

18

19

"He was noticed to be deeply cyanosed shortly after birth and was then found to have complex cyanotic heart disease which was considered inoperable."

20

21

In the first paragraph his cardiac malformations are then set out and they are described as:

22

23

24

25

"His cardiac lesions included a double outlet right ventricle with D-transposition of the great vessels,





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"pulmonary stenosis, mitral stenosis,  
hypoplastic left ventricle, atrial  
septal defect, ventricular septal  
defect, mixed total anomalous  
pulmonary venous return with  
obstructed pulmonary veins."

11

A. Yes.

12

13

Q. Would you agree with me, Doctor,  
that in combination that represents a very complex set  
of malformations?

14

A. Yes.

15

16

17

Q. And continuing with the first  
paragraph, again still descriptive of the history of  
the child:

18

19

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"Towards the end of December 1982 at  
the age of about three months, Gary  
was transferred to Kitchener-Waterloo  
Hospital for further nursing care.  
He was readmitted at this time with a  
one-day history of high fever, up to  
40 degree ..."





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Is that temperature?

A. 40 degrees Celsius.

Q. "... deepening cyanosis and  
marked respiratory distress."

Do I correctly take that, Doctor, to be  
a description of the child's condition at the time of  
his admission to the Hospital for Sick Children or is  
it referring to his admission in December to the  
Kitchener-Waterloo Hospital?

A. I would interpret that as to  
Sick Children's but I may be mistaken.

Q. Can you help us, Doctor? As I  
understand it at the time of his admission in late  
March he was - at the Hospital for Sick Children --

A. Yes.

Q. He was in fact noted to be  
highly and deeply cyanosed at that time?

A. Yes.

Q. And to have a high temperature?

A. Yes.

Q. Thank you, Doctor.

And if we move then to the bottom of the  
discharge report again, on the first page, his course  
in the hospital during the time of his last admission  
is summarized and is set out, and it indicates his







1

2

course following admission through to his transfer to  
the cardiology floor at the beginning of April?

3

4

A. Yes.

5

6

Q. And then on the next page, and  
I will return to this, Doctor, it summarizes events  
on the cardiology floor.

7

8

Now can you help me for a moment,  
Doctor: can you recall whether or not at the time of  
Gary Murphy's death he was on a cardiac monitor?

9

10

11

A. I just don't have that immediate  
recollection. He may well have been but I can't  
remember.

12

13

Q. We will go to the progress notes  
in just a moment, Dr. Freedom.

14

15

A. Yes.

16

17

Q. But can you help us now to the  
best of your recollection at the time of his death was  
a non-resuscitation order in place?

18

A. Yes.

19

Q. No Code 25?

20

A. Yes.

21

22

Q. Would you agree with me, Doctor,  
that that kind of an order is put in place where  
children whose cases essentially appear hopeless?

23

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A. And with consent of the family.

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Q. Absolutely. But it is in circumstances where the diagnosis by the attending physicians and the prognosis appears to be hopeless for the child?

A. I would say, Miss Cronk, more hopeless in the immediacy of the event.

Q. Can you help me with that, Doctor?

A. I think there are lots of children where we don't think that they will survive past, you know, into their teens where the condition is "hopeless", but you wouldn't give a no 25 order.

Q. I see.

A. There are other children like Gary Murphy who virtually spent their entire lives in the hospital that we didn't feel there was anything we could offer this youngster and with the consent of the parents for the immediacy one would give a no 25.

Q. I take it then in your judgment, Doctor, there was no chance that this child would reach what you described previously as voting age?

Now, Doctor, if we could move to the progress notes, and I apologize, Mr. Commissioner, some appear to be out of order and I am not sure whether that is again an error of the copying or for





1  
2 other reasons, but if you could start, if you would,  
3 please, Doctor, at page 86 of the record, and remember,  
4 if you will, that Gary Murphy died on the 23rd of  
5 April. The notes, the progress notes that appear on  
6 page 86 for the day before his death, the 22nd of  
7 April and in two passages appear to describe in the  
8 first instance the nurses' observations as to his  
9 status on the day before his death.

10 I am referring to the nursing note for  
11 1930 to 7:30 a.m. on the morning of the 23rd.

12 Do you see that note, Doctor?

13 A. Yes, I do.

14 Q. And his cardiac status is  
15 described at that time as having a apical rate of  
16 123 to 133.

17 "Colour remained bluish gray becoming  
18 grayer when he cries. You stir ..."  
19 You stir him, he is warm and dry to touch --

20 MR. LAMEK: Skin.

21 MS. CRONK: Q. "Skin is warm and  
22 dry" --

23 A. "Skin is warm and dry to touch".

24 Q. That makes far more sense than  
25 my reading, Doctor.

"Skin warm and dry to touch. Sleeping





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"well between feedings. Chest clear -  
air entry throughout. Taking  
similac 70 ccs poorly ..."

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4

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Indicates that he became quite distressed when being  
forced to feed. He was crying becoming gray and  
diaphoretic.

6

7

8

The assessment was that he was stable  
at the time but a poor feeder. I take that to be the  
plan questioned the advantage of, is it a nasogastric  
tube?

10

11

A. Nasogastric tube.

12

Q. For feedings to reduce the stress  
in feeding and monitor weight each day. Weight  
continuing to drop?

13

14

A. Right.

15

16

Q. That would appear to be his status  
on the 22nd, the day before his death?

17

A. Right.

18

19

Q. Do you recall seeing and examining  
Gary Murphy while he was actually on the cardiology  
ward that day?

20

21

A. Yes.

22

23

Q. And then the later note, again  
for the 22nd of April, with no time indicated: His  
progress is noted to be stable. It is indicated that

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he looks good today. Colour better. Active. Alert, happily and then I have difficulty with the word.

A. NAD I think is abbreviation for no acute distress.

Q. All right. No wheezing. Only slight increase of?

A. Expiratory phase.

Q. Expiratory phase. Cardiac examination was unchanged. Nutrition, his weight was down again, and the plan at the bottom of the page, supplement feedings with nasogastric feeds.

That appears to be the note at the bottom of that page, Doctor?

A. Yes.

Q. Right. And if we turn then to page 87 we see in the middle of the page a note as to his status on the 23rd of April. This would appear to be earlier in the day prior to the onset of his terminal events.

Again it would appear, as I understand it, to be a nursing note.

A. Yes.

Q. Is that correct, Doctor?

A. Yes.

Q. The only description that is





1  
2 contained there for the situation and the condition of  
3 the child prior to the onset of terminal events is with  
4 respect to his nutritional status and it indicates  
5 that he wasn't doing very well; a second feed he  
6 vomitted and was then re-fed at approximately 3:00  
a.m. I take that to be on the 23rd.

7 He took 60 ccs in 15 minutes. The  
8 assessment was that he was vomiting due to cardiac  
9 problem and?

10 A. And some increased respiration.

11 Q. And some increased respirations.  
12 The plan was to continue to feed and possible naso-  
13 gastric tube should be put in. That was the plan on  
the morning of the 23rd?

14 A. Right.

15 Q. Right. And if we move then,  
16 Doctor, and I will return to the note that appears on  
17 the bottom of page 87, but again the notes appear to  
18 be entered in the record somewhat out of order: if we  
19 turn to page 93 of the progress notes we find there in  
20 the first two-thirds of the page a rather lengthy entry.  
21 Again what I take to be a nursing note describing his  
22 condition immediately before the call of Code 25 and  
his status at that time?

23 A. I am not sure where you are  
24  
25





1  
2 reading, Miss Cronk. The top of page on 93 or the  
3 bottom of the page?

4 Q. I am sorry, the top of the page  
5 where it starts the description, cardiac status.

6 A. Yes.

7 Q. "Patient vital signs remain  
8 stable. Apex 128-132. Temperature  
9 36.8-37.2. Respiration 32-34. Blood  
10 pressure 90. Colour remains slightly  
11 dusky but hands and feet were  
12 increasingly cyanotic when crying."  
13 Dropping down there is a description  
14 as to his condition at 1500 hours.

15 "Feed taken completely and 10 ccs  
16 vomitted."

17 Description of parental involvement  
18 and then a notation at 1810 in the evening by the  
19 nurse who is the author of the note:

20 "I entered patient's room to begin  
21 1800 feed. Patient was supine in  
22 bed and appeared to be sleeping.  
23 Set up the feeding equipment and  
24 noted baby's breathing was slowed  
25 and deep on inhalation and exhalation.  
I walked to the right side of bed to





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"reassess and call team leader for assistance. Apex auscultated but breathing ceased. Apex was absent. At this point a Code 25 was called to nursing station. I then began cardiac pulmonary resuscitation after obtaining an open airway."

And the note continues as to the assistance given.

On the basis of that note, as I understand it, Doctor, we have a description of the condition of Gary Murphy later in the day on the 23rd although the nursing note is dated the 24th as to his status immediately before the Code 25 was called. And then the circumstances surrounding the call and the Code 25 itself?

A. Correct.

Q. And immediately prior to the calling of the Code 25 according to this nursing note the child was seen to have vomitted during a feeding at 1500 in the evening?

A. Yes.

Q. 1500 hours in the evening. I take the description of the slowing of the baby's breathing at 1810 in the evening with deep inhalation and exhalation to be a description of essentially bradycardia?







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A. No. The respiratory rate has nothing to do with the heart rate per se. So you can have some children that have a fast heart rate that are breathing fast. Some babies with a fast heart rate that are breathing slowly. So as I read this it doesn't tell us exactly at that time what the heart rate was.

Q. All right.

A. It is just inhalation and exhalation which is breathing.

Q. And we know that the baby was breathing; the breathing at that time was slowed and there was trouble with the respiration?

A. Correct.

Q. And the next note contained with respect to the breathing of the child is that it ceased entirely?

A. Correct.

Q. There is no sign at this stage, at least in this excerpt from the progress notes, Doctor, of any arrhythmias?

A. Correct.

Q. There is nothing to suggest indeed that the child was on the cardiac monitor at this time, is there?





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A. That is correct.

3

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Q. There is nothing to suggest, therefore, not being on a cardiac monitor, any ECG changes that were noted in the child's condition?

5

6

A. Correct.

7

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10

Q. Right. And we turn then, Doctor, to page 92, the preceding page, which appears to be a detailed account, and it is so entitled, a detailed account of the resuscitation efforts undertaken with Gary Murphy.

11

12

13

14

Before examining the note in detail, Doctor, I take it that despite your understanding that there was a no Code 25 on this child, at least initially resuscitation efforts were undertaken once the Code 25 had been called?

15

16

17

18

A. Yes, that is right.

Q. And if we look at the contents of the detailed arrest note I take it to be by Dr. Kenyon?

19

20

21

22

A. Dr. Cindy Kenyon.

Q. Cindy Kenyon? Half way down the page she indicates first that a Code 25 was called on 4A at 1825 hours?

23

24

25

A. Yes.

Q. Half way down the page she





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indicates that cardiac monitor leads were placed.

3

4

Would I be correct, Doctor, in inferring  
from that that at that point the child was put on a  
cardiac monitor?

5

6

A. Yes.

7

8

Q. And continuing:

"Cardiac monitor showed ventricular  
fibrillation."

9

10

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13

A. Yes.

Q. Child was defibrilated. The

result was that the cardiac monitor showed 30 to 60  
seconds of sinus rhythm which again reverted then to  
ventricular fibrillation.

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That would appear to be the sequence of  
events up to that point?

A. Correct.

Q. There was no pulse or perfusion  
during the brief conversion, and by that I take it  
the conversion back to sinus rhythm?

A. Correct.

- - - -





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Q. And then back again to  
ventricular fibrillation?

A. Correct.

Q. The child was defibrillated for  
a second time?

A. Correct.

Q. The result is then described  
as again:

"Brief conversion to sinus rhythm,  
quickly showing course ---".

A. Looks like "v" for ventricular  
fibrillation on monitor.

Q. And resuscitation was discon-  
tinued at this point?

A. Yes.

Q. So stopping there, Doctor,  
although it is not recorded in the nursing progress  
notes on page 93, the child did demonstrate rather  
consistent ventricular fibrillation at the time  
following the calling of the Code 25, the child went  
in and out of ventricular fibrillation and reverting  
on at least two occasions to sinus rhythm?

A. I guess the one thing that is  
unstated, Miss Cronk, I can't tell from this, is when  
they called the Code, was the baby in ventricular







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fibrillation or was he initially bradycardic with extremely slow rate? Sometimes you can't feel a pulse, and then reverted to ventricular fibrillation.

Q I agree, Doctor, it is difficult to tell even reading the two notes in combination.

A. Correct.

Q But would you agree with me that this much is clear, that at the time the nurse entered the room at 1810 in the evening and physically observed the child for the purposes of feeding Gary Murphy, that at that time there were respiratory problems and a very short time later before the calling of the Code 25, breathing had ceased entirely?

A. Yes.

Q And then I take it Dr. Kenyon was on hand and responded to the Code 25 that was called and at that point her notes indicate not bradycardia but ventricular fibrillation at least twice?

A. Yes.

Q If we move to page 88 of the progress notes, Doctor, we see a rather lengthy note which in this instance I take to have been prepared by you?

A. Right.

Q And this is at a time, Doctor,





H.3

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when you indicated that you were ward chief, is this an example of your change in pattern that you have described by directly writing in the status and remarks concerning particular children when you now serve as ward chief?

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A. Yes.

7

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Q. And your note indicates, Doctor, and I will briefly review it with you:

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"Called at home at 18.30 that cardiac arrest had been called.

11

Despite resuscitative efforts, infant could not be resuscitated.

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"This infant has had two cardiac catheter studies which showed a complex heart malformation with a double-outlet RV, pulmonary stenosis, either mitral stenosis or atresia, hypoplastic left ventricle, and obstructed anomalous pulmonary venous connections."

19

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Did you participate in the cardiac catheter studies on this child, Doctor?

21

A. Yes, this baby had two studies and I believe I did the second of the two.

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Q. Was that on the occasion of his last admission to the Hospital, or at an earlier date?





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A. Earlier, I believe - unfortunately, Miss Cronk, I left my notes at home or in the Hospital, I believe it was some time in October.

Q. And you continue in your note, Doctor:

"Despite pulmonary outflow --- ", I have difficulty with the next word?

A. "Stenosis ... ".

Q. I am sorry.

A. "Despite pulmonary outflow tract stenosis ... ".

Q. "The obstructed and pulmonary venous connections prohibited any form of systemic pulmonary shunt, and for this reason the patient was considered inoperable."

A. Correct.

Q. That would accord, Doctor, with what you have described to be the normal situation when a Code 25, a non-resuscitation and no Code 25 is put in place with parental consent on the patient?

A. Correct.

Q. It would appear that even what we have heard described as heroic surgery was not considered a possibility for this child?





H.5

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A. That's correct.

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Q. "This baby was discussed

4

several times re operative intervention,

5

most recently 12.4.83."

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You then indicate:

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"Infant seen on rounds this a.m. -

8

chronically tachypneac and cyanosed,

9

and when stimulated was fretful."

10

You then go on to indicate that you

11

notified the Coroner's Office of the death at 1945 on

the 23rd of April, 1983. Correct, Doctor?

12

A. Yes.

13

Q. Now, there is also an indication,

14

Doctor, in your note, that blood was taken at the end

15

of the resuscitative efforts and sent for digoxin

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levels. I take it you were not physically present

17

when that was done, Doctor, as you were not present

at the arrest?

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A. Correct.

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Q. You had been informed by the

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attending physician, Dr. Kenyon, that that had occurred?

21

A. No. I believe I asked my Fellow

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and resident if blood had been taken according to the

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police and coroner's request from March of 1981 and

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I was informed it had been taken at the end of the

procedure.

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Q Now, Doctor, it is my understanding, and perhaps you can assist us with this, that Gary Murphy had been prescribed digoxin from the evening of his admission to the Hospital on March 27th, through to the morning of his death, that is April 23rd, 1983, and that he received the last dose at 9 a.m. on April 23rd?

A. Correct.

Q Does that accord with your understanding of the medications prescribed for him?

A. Yes.

Q And he was receiving it twice a day throughout that period?

A. Yes.

Q Would it help you, Doctor, to look at the medication treatment records briefly at page 117, at least they start at page 117, and at page 118 it indicates that the dose prescribed was .02, is that milligrams?

A. Milligrams.

Q And he was receiving that twice a day inclusive of the morning of his death?

A. Correct.

Q Now, Doctor, there were a number of digoxin levels as I understand it obtained in





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you look to the left of the page beside the word  
"digoxin".

A. You are right, nanomoles.

Q. It says nanomoles?

A. Right.

THE COMMISSIONER: And again the  
difference, or are you going to give this to us?

MS. CRONK: I am certainly going to  
try, Mr. Commissioner.

Q. As I understand it, just to  
refresh our recollection as to the evidence we have  
heard, Dr. Freedom, we have heard evidence that a  
nanogram is one billionth of a gram, would you agree  
with that?

A. Right.

Q. We have also heard evidence, and  
I am referring now, Mr. Commissioner, to the evidence  
of Dr. Ellis, that a nanomole, and I say this with  
some difficulty, was 10 to the minus 9 of a mole and  
when asked to further elaborate on that he indicated  
that 2.5 nanomoles would be approximately the  
equivalent of 2.0 nanograms, would you agree with that,  
Doctor?

A. Yes.

Q. So I take it then that when we





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see a level of 1.4 nanomoles, were that to be  
converted to nanograms we would in fact be talking  
about something less than that?

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A. Yes.

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THE COMMISSIONER: Were the nanograms  
compared to litres or were they compared to millilitres?

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MS. CRONK: To millilitres, sir.

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THE COMMISSIONER: That can't be quite  
the same because nanomoles are compared to litres, are  
they not?

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MS. CRONK: Dr. Ellis - you are quite  
right, sir, Dr. Ellis' evidence was that 2.5 nanomoles  
per litre would be roughly equivalent, that's right.

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THE COMMISSIONER: And a litre equals  
2.0 nanograms per millilitre?

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THE WITNESS: Per millilitre.

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THE COMMISSIONER: Per millilitre, yes,  
all right.

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MS. CRONK: Q. So then, Doctor, I  
don't purport to be in a position to do the conversion,  
but nonetheless the 1.4 nanomoles would be higher than  
the reading which we would see were it converted to  
nanograms?

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A. Yes.

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Q. And similarly the third sample

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that is reported on that page is a sample that was  
taken at 9.05 a.m. on April the 4th, 1983, with a level  
that was recorded of 1.5, again nanomoles?

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A. Correct.

6

Q. The reading in nanograms would  
be less than that?

7

A. Correct.

8

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Q. Now, Doctor, as I understand it  
the only other antemortem sample taken with respect  
to Gary Murphy was a sample that was taken on April  
the 11th. If you will turn to page 146, well, indeed  
it is page 145 and 146, there was a sample taken on  
April the 11th, 1983, at 8.20 a.m., again an  
insufficient amount of the sample was available for  
the completion of an assay test and the obtaining of  
a fixed level, is that your understanding, Doctor?

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A. Yes.

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Q. Doctor, to your knowledge other  
than the reading that was obtained, the last reading  
that was obtained on April the 4th and reported in  
the biochemistry report, is there any other antemortem  
level for Gary Murphy for digoxin of which you are  
aware?

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A. There is none.

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MS. CRONK: Mr. Commissioner, might it

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be appropriate to stop there?

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THE COMMISSIONER: Yes.

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MS. CRONK: Regrettably I will not  
finish before lunch.

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THE COMMISSIONER: Yes, all right.  
Until 2:30 then.

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MS. CRONK: Thank you.

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--- Luncheon adjournment.

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--- Upon resuming:

THE COMMISSIONER: Yes, Miss Cronk?

MS. CRONK: Thank you, Mr.

Commissioner.

Q Dr. Freedom, you will recall that before the luncheon break we were reviewing the antemortem digoxin levels that had been recorded for Gary Murphy. You will recall as well that you told me that as far as you are aware, and certainly this is supported by the medical record, that the last antemortem level known in a fixed amount for Gary Murphy was that determined on April the 4th, and it was in the amount of 1.5 nanomoles, and something less than that if it were measured in nanograms. Do you recall that discussion?

A. Right.

Q I take it then, Dr. Freedom, that you would agree with me that when you, in your discussion with Mr. Ortved earlier this week, when you referred to Gary Murphy's case as a milestone in your understanding of digoxin levels, you were not referring to his antemortem digoxin levels but rather his postmortem digoxin levels?

A. Correct.

Q Similarly, I take it you would





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agree with me that based on the limited data that is available concerning the level of digoxin in Gary Murphy ante mortem, the antemortem levels are relatively of little assistance to us in his case?

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A. Correct.

6

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Q. You are not suggesting then I take it an analogy between the antemortem levels in Gary Murphy and those found in Kevin Pacsai?

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A. Before death, no.

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Q. And similarly I take it we can agree, at least, I assume it was not your intention to suggest a similarity between the cardiac condition of Kevin Pacsai and Gary Murphy?

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A. Correct.

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Q. Could we move then, Dr. Freedom, to the postmortem levels found for digoxin in Gary Murphy. I refer you first if you would to page 92 of the record, again that is the detailed account of the resuscitation efforts that were undertaken.

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A. Yes.

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Q. Would you note with me, Doctor, two-thirds of the way down the page after the notations indicating the fluctuations experienced by Gary Murphy from ventricular fibrillation to sinus rhythm and back to ventricular fibrillation, there is an indication:

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"Cardiac monitor showed ventricular fibrillation which slowed and became asystolic ... ",

and then the notation:

"3 cc. heparinized blood taken from the heart via substernal puncture without difficulty, blood taken within two minutes of stopping resuscitation."

A. Yes.

Q. And we know, Dr. Freedom, and I take it you would agree, that according to the arrest notes and the notes, the nursing notes of the resuscitation efforts that were undertaken, the resuscitation was discontinued and Gary Murphy was pronounced dead at approximately 18.37 p.m.?

A. Correct.

Q. On the evening of April 23rd?

A. Correct.

Q. You agree with me then that on the basis of Dr. Kenyon's note it would appear that shortly before that 3 cc's of blood were taken from the heart in the manner that he describes, and that was within approximately two minutes of cessation of resuscitation efforts?

A. Right.







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Q. Could you turn then with me,  
sir, to page 147 of the record.

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THE COMMISSIONER: I am sorry, I am  
not too sure, is this two minutes after stopping, or  
is it two minutes before, or could it be ---

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MS. CRONK: That is a good point,  
Mr. Commissioner.

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Q. Can you help us with that,  
Dr. Freedom?

A. No, I interpreted it, Mr.  
Commissioner, as two minutes after.

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Q. I confess as did I, Mr.  
Commissioner.

THE COMMISSIONER: It is probably a  
sensible interpretation but I would have preferred  
the words "after" to "of" to make it clear.

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MS. CRONK: Q. Doctor, could you turn  
then with me if you would to page 147 of the progress  
notes?

A. Yes.

Q. And we find on that page, Doctor,  
the results of three samples and three assays run for  
digoxin on Gary Murphy.

A. Yes.

Q. The first on April 23rd, 1983,





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and the hour of collection shown on the biochemistry report is 2300 hours, that is approximately 11 p.m. on the night of the 23rd. I take it we could agree that would not appear to be the sample, the blood sample referred to as having been taken either two minutes before or two minutes after the cessation of resuscitation efforts, that would have occurred at approximately 6:35 in the evening?

A. Yes.

THE COMMISSIONER: This child died, what time?

MS. CRONK: 6:37 p.m., sir.

THE COMMISSIONER: Yes, all right.

MS. CRONK: Q. That appears, Doctor, to be a different sample?

A. Yes.

Q. And it resulted in a reading again of 24 nanomoles per litre?

A. Yes.

Q. And if we turn, perhaps you could just keep your hand at that portion of the record, Doctor, and turn back with me if you would to page 90 of the progress notes. We see on pages 90 and 91 a rather lengthy nursing note of the events of April 23rd and then April 24th, 1983. About half way





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down the page on page 90 the notes record as follows:

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"Medical records notified at 22.30

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hours. Chart remained on ward as

5

Dr. Beck was still dictating his note.

6

When took chart down to medical office  
of records, office was closed.

7

Returned chart to ward. TDM lab ... "

8

I take that to be the Therapeutic Drug Monitoring Lab?

9

A. Yes.

10

Q. "TDM lab - where blood work

11

for digoxin levels are processed,

12

requested another blood specimen.

13

Informed Dr. Cloutier who was still

14

with the coroner. Dr. Cloutier spoke

15

with the TDM lab. Arrived on the ward  
at 2300 from Fellows room with coroner.

16

Dr. Cloutier, Dr. Naiberg ... ",

17

is that correct?

18

A. Yes.

19

Q. " ... and others" as indicated

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there, " ... accompanied doctors to

21

Room 439, where Dr. Cloutier obtained

22

another specimen of blood by an intra-

23

cardiac stab. Labelled specimen and

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Dr. Cloutier took it to lab himself."

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I take that to be then, Doctor, on the basis of the progress notes, the specimen that was collected, assayed and resulted in the first level of 24 nanomoles which is recorded on page 147 of the biochemistry results, do you agree with that, sir?

A. Yes, I do.

Q. Do you know, Dr. Freedom, whether or not the first sample that was recorded as having been taken shortly before or shortly after resuscitation efforts was of a sufficient quantity, or amount, to in fact be assayed?

A. Yes. My recollection is that came back with a greater than number, but they didn't have enough to run a second testing. So on the basis of that Dr. Cloutier obtained the second sample.

Q. And I can't assist you particularly with that, Dr. Freedom, because I have not seen the digoxin books that may be maintained, or were maintained in April of this year in the Therapeutic Drug Monitoring lab. Your recollection as I understand it is that for purposes of further dilution a further sample was required?

A. Yes.

Q. Then again referring to the other sample set out on page 147, the first then is







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the one taken at approximately 11 p.m. on the 23rd,  
and that is approximately 24 nanomoles?

A. Right.

Q. The second one is a sample that  
was apparently taken at 4:30 a.m. on April 24th?

A. Yes.

Q. Do you see that?

A. Yes.

Q. And that as well resulted in a  
level of 24 nanomoles?

A. Yes.

Q. Do you see that, Doctor?

A. Yes.

Q. And then the third postmortem  
sample again taken April 24th, this one at 18.45 p.m.  
and that as recorded on page 147 resulted in a reading  
of greater than 6.4 nanomoles, do you see that, Doctor?

A. Yes.

Q. And if we look at the notations  
under each of those samples, we see the one taken at  
11 p.m. on April 23rd, was a sample of heart blood?

A. I do not see where you are  
reading?

Q. I am looking at the words "see A",  
and if you look to the bottom of the page beside "A"  
it indicates "heart blood".





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A. Yes.

Q. And with the next postmortem sample where it says "see B".

A. Yes.

Q. We look at the bottom of the page and we see that was a specimen of sagittal sinus?

A. Right.

Q. Plasma?

A. Right.

Q. And similarly the third one was a specimen of heart blood?

A. Correct.

Q. And if we look to the next page, page 148, Doctor, Sample No. 212098, which according to the previous page is the one taken at 18.45 p.m. on April the 24th, it would appear on further dilution to have resulted in that reading again, 24 nanomoles. Do you agree, sir?

A. You are going pretty fast, let me just see, yes.

Q. Page 148, that appears to be the result of further dilution of that sample. Let me help you, Dr. Freedom.

A. Could you?

Q. Yes, page 147?





AA.10

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A. Right.

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Q. The third sample shown as having  
been taken on April 24th?

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A. Correct.

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Q. At 18.45?

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A. Correct.

7

Q. Sample number designated is

8

212098.

9

A. Yes.

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Q. Do you see that?

11

A. Yes.

12

Q. And if we turn to the next page  
we see that same sample number indicates a level of  
24 nanomoles?

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A. Yes, I see that now.

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Q. Now there is however some

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difficulty because the hour of collection is shown to  
be 9 a.m. on the 24th.

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A. Right.

19

Q. And if we turn to page 149, the  
very next page, again we see the same Sample No. 212098.

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A. Right.

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Q. The same time, taken at 18.45

22

on the 24th of April.

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A. Yes.

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AA.11

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Q. The same level result, 24

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nanomoles?

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A. Correct.

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Q. I take it then, Doctor, that on

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the basis of the postmortem readings disclosed by the  
biochemistry report that whether it was three or four

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postmortem samples that were actually assayed, the

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result in each case would appear to have been 24

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nanomoles?

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A. Correct.

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Q. And if we could turn to page 141,

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the reading disclosed on this page, Doctor, is again

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of the sample taken at 4.30 on April 24th, 1983. Do

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you see that, sir?

A. Yes.

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Q. And again the level is 24

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nanomoles?

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A. Yes.

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Q. Then there is a notation at the

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bottom of the page in handwriting, Doctor, that

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indicates 24 nanomoles per litre equals 18.47 nanograms  
per millilitre.

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A. Yes.

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Q. Do you know whose handwriting

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that is, Doctor?

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A. I just read the signature at the bottom.

Q. Do you know whose signature it is?

A. Yes, it is Dr. Charles Smith, I believe.

Q. Would you agree, Doctor, that if the appropriate conversion factor is applied to a postmortem level of 24 nanomoles that that results in a reading if measured in nanograms, a reading of 18.7?

A. Yes.

Q. Doctor, I take it then that when you referred in response to Mr. Ortved to a digoxin level for Gary Murphy having been obtained in the area of the 20's or the 30's, that you had in mind the nanomole measurement of 24 that we have seen with the result of the post mortem testing in the Hospital?

A. Actually that evening, or early that morning when we were getting the level back, we were confused as to which system people were employing at the time. I didn't realize until some time later that what I had been referring to was the old way versus now the new way.

Q. I take it we can agree, however, Doctor, that on the basis of the biochemistry readings available in the Hospital that if measured in nanograms the post mortem reading was 18.7?





AA.13

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A. Correct.

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Q. Not in the 20's and the 30's?

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A. Correct. My initial impression was that we were using - when we got that number back that we were using the same nomenclature as 1980.

6

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Q. And I take it then, Doctor, would this be fair, that when you referred to Kevin Pacsai's post mortem reading as having been lower but in the same range that you were confusing the nanomole reading on Gary Murphy because we know that Kevin Pacsai's post mortem reading was 26 nanograms, considerably higher than the 18.7 for Gary Murphy?

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A. Yes.

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Q. Doctor, if we can turn then to the question of terminal events sustained by Gary Murphy?

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A. Yes.

17

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Q. We have reviewed the nursing note and the detailed arrest note in the record prepared by Dr. Kenyon as to the events preceding the arrest.

19

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A. Yes.

21

Q. Preceding the pronouncement of his death.

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A. Yes.

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Q. Can we agree, Doctor, that prior





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to the Code 25 being called and the resuscitation efforts being undertaken, that the symptoms that were being manifested by Gary Murphy at that stage were first, deepened respirations?

A. Yes.

Q. Secondly, his breathing ceased altogether?

A. Yes.

Q. And then thirdly we know from the arrest note of Dr. Kenyon that after the Code 25 was called and he arrived at the bedside of the child that ventricular fibrillation was noted at least twice?

A. Yes.

Q. And that there were ECG changes once the cardiac monitor was put in place, because the child went from ventricular fibrillation to sinus rhythm and back to ventricular fibrillation.

A. I may have lost you a little bit. Obviously they couldn't tell if there was ventricular fibrillation until they had the monitor on.

Q. Yes, and once more I take it we can agree that one of the symptoms the child manifested was ECG changes, because he went from ventricular fibrillation back to normal sinus rhythm and back again to ventricular fibrillation, can we agree on that, Doctor?





AA.15

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A. Yes.

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Q. Can we agree as well that on the

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basis of the nursing notes of the arrest and the

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terminal events, and on the basis of the attending

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physician's note, that is Dr. Kenyon, that there would

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not appear to have been experienced by Gary Murphy

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arrhythmias?

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A. No, I don't believe we can say

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that. Because again we didn't have a monitor on him

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until he had the problems.

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Q. Can we agree, Doctor, that once

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the cardiac monitor was put in place, and on the

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basis of what is apparent from the notes of the

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record, that there was not, on the basis of those

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notes, there is no indication of arrhythmias?

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A. Yes.

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Q. And similarly, on the basis of

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what is available to us in the record, there is no

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indication of tachycardia?

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A. True.

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Q. And similarly on the basis of

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what is available to us in the records of the

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attending physician and the nurses, there is no

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indication of an increased lethargy?

A. Correct.







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Q. No indication of vomiting at the  
time of the arrest?

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A. Correct.

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Q. And finally, no indication as  
you told me this morning of bradycardia?

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A. Yes.

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Q. On the basis of your knowledge  
of these events, Doctor, and your review of the  
medical records of Gary Murphy, were the terminal  
events sustained by him, their onset and their course  
following onset, consistent with his clinical and  
anatomical condition as you knew it?

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A. Yes.

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Q. And similarly, Doctor, were  
the symptoms we have outlined and the events and the  
course of the events consistent in your view with  
digoxin intoxication?

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A. No.

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Q. Doctor, can we review then  
briefly a number of the facts which appear to have  
been established and the condition and the course of  
Gary Murphy in the Hospital on the basis of the  
medical record? I suggest to you there are a number  
of material differences between Gary Murphy's case  
and the cases of the 36 children that this Commission  
has been looking at.

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First, Gary Murphy's condition you  
have told us was inoperable?

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A. Yes.

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Q. And beyond any suggestion of  
heroic surgery, which you told me this morning was not  
considered available or appropriate for him, there was  
no suggestion that any form of palliative surgery could  
be undertaken?

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A. Certainly it had been suggested  
in several previous discussions about this youngster,  
but I think the bottom line after reviewing all his  
data was that we did not think that it was appropriate.

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Q. And secondly, with respect to  
this child, we know there was a no Code 25, a do not  
resuscitate order in place. Of the 18 or 19 children  
that you have been discussing in your evidence both  
in chief and on cross-examination by other counsel,  
with the exception of Paul Murphy, was there a do  
not resuscitate order in place in respect of any other  
child that you can presently recall?

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A. No.

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Q. This child's condition then  
was considered I take it more hopeless than those you  
and I have been discussing in the past few days?

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A. Well, a lot of the patients we





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have discussed in the last few days had terribly severe heart disease, where no matter what one did I think the outcome of surgery would probably have not been favourable. I think that although I didn't have any direct contact with some of the babies that had hypoplastic left heart syndrome, their condition in Toronto is considered hopeless, inoperable, with an inexorable course.

Again I think the experience of Sick Children's in the past six or seven years would suggest that Kelly Montieth, the baby with the anomalous left coronary, that no matter what we tried to do at times of surgery they have all died.

So I think it is very difficult to look at degrees of hopelessness in this. I think basically being a physician one is an optimist and trying to have some optimism.

We did make a decision not to operate on Gary Murphy. We put a no code in his chart. I am not sure that separates Gary Murphy from the hypoplastic left heart and this other type of condition.

Q. And I understand, Doctor - can we agree however that in respect of the 18 or 19 children including Kelly Montieth that we have been discussing, that with the exception of Paul Murphy





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resuscitation efforts were undertaken in respect of those children at the time of the onset of their terminal events, and there was nothing in their records to indicate a 'do not resuscitate' order had been discussed and consent obtained from their parents?

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A. Again I would have to take a look at each of the charts of all the ones I am not familiar with, but the ones that you and I have addressed over the last week and a half I would agree the only one that did not have a 'no 25' was Paul Murphy.

Q. All right, thank you, Doctor.

MR. ROLAND: As I recall it, and I may be wrong, as I recall it Perreault had a 'do not resuscitate' order. She said there were no others --

MS. CRONK: Well my question, Mr. Commissioner, in fairness to Dr. Freedom, my friend is quite right, of the 36 children, it is my understanding that there were four children in respect of whom resuscitation efforts were not undertaken. Dr. Freedom, as I understood his earlier evidence, was not involved in the care of the Perreault child.

MR. ROLAND: But my friend began by saying the differences between Murphy and the 36 children.

THE COMMISSIONER: I thought you were dealing with the 18, I may be wrong.







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MS. CRONK: And I don't wish to leave any impression, Mr. Commissioner. Of the children with which Dr. Freedom is familiar, as I understood it, it is restrictive to Paul Murphy.

THE WITNESS: Correct.

MS. CRONK: Q. Thank you. Thirdly, Doctor, you have told us earlier this morning that in your view, based on your knowledge of this child, there was no chance that this child would reach voting age?

A. I am sorry, now you are talking about Paul Murphy?

Q. I am talking about Gary Murphy.

A. Yes, that's true.

Q. Right. And fourthly, Doctor, - well, Doctor, may I ask you. We know that you testified at the inquest that was held with respect to Gary Murphy?

A. Right.

Q. Were you present during the evidence of Dr. Kauffman?

A. No.

Q. At the inquest?

A. No.

Q. Were you subsequently made aware of the nature of the evidence which he had given





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concerning Gary Murphy at the inquest?

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A. Just in a superficial way. I have not had the opportunity to look at exactly what he said.

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Q. All right. Doctor, at the inquest with respect to Gary Murphy Dr. Kauffman testified, and I am sorry I don't have a duplicate copy of this but I will read it to you. He testified at page 43, for the benefit of those who have the transcript. In speaking of the various hypotheses which he had advanced as possible explanations for the postmortem digoxin level found in Gary Murphy he was asked this question:

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"Doctor, your hypothesis is based on the fact and also I take it that when you were talking about cell deaths that it bears very much in mind that this child was a very ill child with a very very unusual and complex heart disease which is quite unique to this particular child."

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And his answer was as follows:

"Well, I think he is a very exceptional child for a number of reasons: the severity of his heart





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"disease, the fact that he survived as long as he did with such a severe heart disease and his ability to deal with infection as well as he did. One thing I didn't mention, this child had no spleen. He was born without a spleen and people without spleens cannot deal with bacterial infections and this child had several which could have been life threatening infections prior to and during this hospitalization and did recover from two of them. But that is one of the things that could have eventually, had he acquired additional infection had he live longer, could have been one of the things very likely that could have resulted in his demise eventually because he was very unusual in that way too.

Q. Could you speak to the levels then that you are explaining? Would it be correct to say then that you are not saying that these are normal levels?

A. No, these are not normal levels,





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2 "this was not a normal child. He  
3 was very exceptional physiologically  
4 and anatomically and these are not  
5 normal levels and I don't think that  
6 you can extract anything from this  
7 very unique situation necessarily to  
8 the literature or to other cases."

9 Dr. Freedom, do you agree that Gary  
10 Murphy, based on his physiological and anatomical  
11 condition was a child which, on a comparative basis,  
12 could be said to have been much sicker than the 18  
13 or 19 children that we have been discussing previously?

14 A. No, I don't agree with that.

15 Q. Was he in your view, or did the  
16 conditions that he had in your view represent a  
17 unique set or combination of cardiac malformations?

18 A. No.

19 Q. Right.

20 A. Well, let me qualify that. If  
21 you compare Gary Murphy to the other children that are  
22 the basis of this forum, his precise malformations  
23 were different. But other children had diseases that  
24 were lethal as well. There is a lot of literature on  
25 babies who have the so-called asplenia syndrome. I  
was interested in that some years ago and wrote a







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number of papers about it where I had reviewed not just the Sick Children's data but the literature. And while an uncommon problem I would not characterize it as rare.

Q. Dr. Freedom, Dr. Kauffman also at the inquest held with respect to the death of Gary Murphy expressed the opinion that in his view in the last several weeks of Gary Murphy's life the child's condition was progressively and gradually deteriorating. He expressed the view further that his death, based on the condition as he understood it, was not unexpected. Do you share that view?

A. Yes.

Q. Right. Finally, Doctor, again with respect to perhaps those matters that can be said to be dissimilar between the case of Gary Murphy and the cases of the children that we have been discussing, I take it you would agree with me that this child is different in at least one further respect and that is that he did not, on the face of the medical record, have elevated antemortem digoxin levels which caused the attending physician's concern?

A. Correct.

Q. Right. Now fairly, Doctor, I suggest to you further that there are similarities





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between the case of Gary Murphy and those cases that we have been discussing in the past several days and in that regard would you agree with me that the fact that Gary Murphy exhibited as part of his terminal events ventricular fibrillation and ECG changes in the electrical conduction mode of his heart at the time of death are matters that we have seen in respect of some of those other children?

A. Yes.

Q. All right. And secondly, although there was a no Code 25 -- I'm sorry, I am expressing that improperly -- although there was a do not resuscitate order in place with respect to Gary Murphy, like many of the children we have discussed resuscitation efforts were undertaken and they failed?

A. Correct.

Q. All right. And thirdly, like many of the other children that we have discussed, a postmortem digoxin level was found at a level that would be considered beyond therapeutic range that might be expected?

A. Yes.

Q. And in that regard, Doctor, may we agree that it is the finding of the postmortem





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digoxin level in Gary Murphy's case that requires an explanation?

A. Yes.

Q. All right. Doctor, we know that an inquest was held into the death of Gary Murphy and we know as well that the conclusion at the end of the inquest, the coroner's conclusion is revealed on the Certificate of Death, was that his death was as a result of complex congenital heart disease. Did you share that view, Doctor?

A. Yes.

Q. Various hypotheses as I alluded to a few moments ago were advanced in evidence at the inquest as to the possible basis for accounting for the postmortem digoxin level of 18.7 nanograms found in Gary Murphy. Are you familiar, Doctor, with the hypotheses advanced by Dr. Kauffman in evidence at the inquest?

A. No.

Q. All right. If I were to tell you that one of the hypotheses that he considered was the possibility of kidney disfunction or kidney shut-down, is that a matter which you have had previous knowledge or does that come as a surprise?

A. No, we had discussed that at one





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of our preliminary sessions. So, I did look at the  
chart in that respect.

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Q. All right, Doctor. To assist  
you, and again I apologize for not having a copy of  
this extract, at page 38 of Dr. Kauffman's evidence  
at the inquest --

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THE COMMISSIONER: Should we not -  
perhaps you're going to do it but Dr. Freedom said he  
looked at the chart. Are we looking at the chart now?

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MS. CRONK: We are looking for the  
moment, sir, at the testimony of Dr. Kauffman at the  
inquest and then we are going to return to the chart.

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THE COMMISSIONER: Well, as long as we  
don't forget to ask Dr. Freedom what he found in the  
chart.

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MS. CRONK: No, I am coming back to  
that, sir.

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THE COMMISSIONER: Yes, all right.

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MS. CRONK: Q. At page 38 of the  
transcript of Dr. Kauffman's evidence at the inquest,  
Dr. Freedom, with respect to the fourth hypothesis  
which he had considered he said as follows:

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"The fourth theory is that because of  
his deteriorating clinical condition,  
the ability of his liver and his

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"kidneys to metabolize and excrete digoxin would be decreased, thereby decreasing the ability of the body to clear the drug allowing gradual accumulation over that three week period to high serum concentration in spite of the normal maintenance he was receiving."

Stopping there, Dr. Freedom. Do you understand that this is a hypothesis Doctor Kauffman was advancing to explain the postmortem digoxin level?

A. Yes.

Q. Right. He then continued in his evidence:

"I have been through the chart several times trying to find any evidence to support the presence of impaired kidney function or impaired liver function. I can find no evidence that the kidney function was reduced and other than the liver being congested, which one would expect in congestive heart failure, I see no evidence of liver disfunction. I





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really can't support that theory."

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Doctor, do you agree on the basis of your knowledge of this child's condition and your review of the medical record that there was no evidence in the case of Gary Murphy to suggest kidney malfunction or liver malfunction?

A. It is a two-sided question, let me address the liver first.

Q. Fine.

A. And the answer to that is simply, believe it or not, is yes, I agree with you.

Q. I have no difficulty in accepting that, Doctor.

A. Secondly, I think as we talked about here before, last week, the manifestation of having a high BUN or an elevated BUN, which is one of the manifestations of a decreased renal function necessitates a normal protein intake. Now, we know this baby was not feeding appropriately and I would have to speak to one of my nutrition experts to say, was this baby getting enough protein in his diet to state that a BUN of this level is quote "normal".

Q. Is there anything in the medical record, Doctor, to which you can direct us which, in your view, suggests that Gary Murphy was experiencing





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either kidney shutdown or severe kidney malfunction,  
other than the nutritional notes?

A. No, there is not.

Q. Thank you. When you refer to  
the BUN level sustained by the child, can you help us,  
Doctor, as to what that was in the day or two  
immediately preceding his death?

I can tell you, Doctor, that I have  
looked at those results and it is quite possible I have  
missed them but I have been unable to locate any BUN  
readings in the days prior to his death.

A. Well, let me see. Let me go to  
my briefcase.

Q. Thank you, Doctor.

A. Again I am sorry, Miss Cronk,  
I have on April 21st a urea, blood urea of 3.8. That  
is blood urea nitrogen, I would presume, that on  
April 21st was 3.8 millimoles per litre. I have  
abstracted that from the chart and right now I  
unfortunately didn't mark the page number down.

Q. Doctor, I thank you for that and  
I won't take any more of your time in that regard.

MR. LAMEK: 139.

MS. CRONK: Q. Mr. Lamek suggests  
that it is to be found at page 139.





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A. And Mr. Lamek is correct.

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Are you aware of what the reading was Doctor thereafter, or are there any readings post April 21st of which you are aware?

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A. The last one I have, Miss Cronk, was the one on this page.

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Q. All right, thank you. Is there anything else in the record other than that level, Doctor, on the 21st of April which in your view suggests that the child may have been experiencing renal difficulties?

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A. No.

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Q. Thank you.

THE COMMISSIONER: What does this urea level, what does that mean?

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THE WITNESS: Again, as I have said before, Mr. Commissioner, that reflects both the dietary intake and the ability of the kidneys to excrete nitrogenous wastes.

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THE COMMISSIONER: Yes, but I am sorry, what I really meant was what does the figure, what does 3.8 mean? Is that a good figure or a poor figure?

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THE WITNESS: Well, okay, the normal levels for a normal urea in SI units under one years of age is 2.9 to 10.







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THE COMMISSIONER: 2.9 to ...?

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THE WITNESS: 10.

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THE COMMISSIONER: Did you mean the  
numeral 10?

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THE WITNESS: To numeral 10 millimoles  
per litre.

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MS. CRONK: Q. Millimoles or nano-  
moles, Doctor?

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A. Millimoles.

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Q. Doctor, is the urea - I am sorry,  
Mr. Commissioner, was there anything else?

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THE COMMISSIONER: No, no, no. I am  
just wondering, what makes 3.8 so remarkable. It seems  
to be within the range.

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THE WITNESS: Again though I think it  
is within the range but I think that sometimes these  
numbers can be misleading if, for instance, the baby  
is not having enough protein in the diet. So, it  
might be closer if the baby were having a normal  
protein diet, and again this is just hypothesis, could  
it be at somewhat higher?

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Q. All right. Doctor, we have seen  
in other charts in biochemistry computer printouts an  
actual reading for what is described as the BUNs.

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A. Yes.





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Q. Is this in your view tantamount or the same thing, a urea reading is the same thing as the BUN readings?

A. I am not a hundred percent sure.

Q. All right, fair enough.

Similarly, Doctor, with respect to the readings that are noted on page 139, I take it you would agree with me that the reading of 3.8 on April 21st is certainly lower than the child appears to have been experiencing at the beginning of the month?

A. Yes.

Q. All right. Now, finally, Doctor, as ward chief --

THE COMMISSIONER: I am sorry, I am totally lost now. It is lower, and what does that mean?

THE WITNESS: That the kidney is able to excrete. Well, I guess one can look at it one of two ways, is that what is left in the body is what the kidneys aren't excreting. So that as the number goes down I think one could make two assumptions: one is that the kidneys are working or, two, the kidney is working but there is inadequate dietary intake.

So, for instance, if you take people that are starving, like, on a diet, often their BUNS





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and ureas are elevated because they're breaking down their own tissues. So, I think there are several factors, as I look at a BUN, or a blood urea, that would go into that equation, but certainly Miss Cronk I would agree with you they aren't striking.

MS. CRONK: Q. And is it reasonable in your view, Doctor, to infer from those levels which we see at the beginning of the month to have been 8.0, 7.0, 4.1, that it would appear that Gary Murphy's excretion ability had improved by the 21st of April? Is that a reasonable inference in your view?

A. I wouldn't say that because again, you know, the change in dietary intake might influence the numbers, but certainly I would agree that there has not been a dramatic change.

Q. Doctor, you were ward chief I think you told us at the time of this child's death?

A. Right.

Q. Do you recall any of the attending physicians drawing to your attention while you were on the ward or at the morning cardiology conferences concern over Gary Murphy's functioning of the kidneys?

A. No.

Q. Thank you. Doctor then with





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respect to the entire case of Gary Murphy and with the knowledge of the postmortem digoxin level that was reported on assays conducted in the hospital, leaving aside the 36 children whose deaths this Commission is looking at, was the postmortem digoxin level in Gary Murphy's case the highest postmortem level for digoxin which to your knowledge has been recorded in the hospital since March of '81?

A. Yes.

Q. Thank you. And would you agree with me, Doctor, that the significance --

A. No, excuse me, that may be wrong. You know, I think Dr. Ellis' notebooks might show a different number, but to my knowledge --

Q. To your knowledge that was the highest?

A. Correct.

Q. All right. Would you agree with me Doctor as well that with respect to the significance which is to be attached to that level, if any, that is a matter in respect of which our questions should properly be addressed to the pharmacologists when they come to give evidence?

A. Yes.

Q. All right. Then again finally









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Doctor with respect to the experience of Gary Murphy and the postmortem level that was obtained in his case, would you agree with me that it does not appear to assist us in respect of the cases of children where the children were known, the infants were known not to have received digoxin during life where they were found to have digoxin present post mortem? This child was on digoxin.

A. I think you are comparing apples and oranges, I mean, as I interpret your question. We know from the literature that some of us will have measurable levels of digoxin because of the type of immuno assay that was done, so, I would have a concern in a patient who is not on digoxin that what one is measuring is not digoxin compared to Gary Murphy that was on digoxin.

Q. All right. My point is no higher than that, Doctor, that the Gary Murphy experience is not analogous to those cases that we have been considering where children were not on digoxin yet antemortem and postmortem digoxin levels were recorded.

A. Okay.

Q. Do you agree with that, sir?

A. I think so. I will have to think





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about it but I think so.

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Q. Well, it will be a few minutes

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yet, Doctor. If you change your view you can let me know.

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A. Yes.

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Q. Turning then --

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THE COMMISSIONER: Only a few minutes though.

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MS. CRONK: Only a few minutes.

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Q. Doctor then, turning then if we

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may to the question of antemortem digoxin levels generally.

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A. Okay.

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Q. Do you recall giving evidence

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during your cross-examination by Mr. Scott concerning

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the highest serum level for digoxin in connection with

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living children that you had seen?

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A. Yes.

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Q. Do you recall that Doctor?

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A. Yes.

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Q. And just to refresh your memory,

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Volume 30 at page 5578 of the transcript of your

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evidence. You were asked by Mr. Scott what the

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highest serum level for digoxin in connection with

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children was with which you were familiar and your

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answer was that you could remember several children who presented themselves at the hospital over a number of years having ingested either their parents or their grandmothers' digoxin, taken inadvertent overdoses and who showed levels as high as 14 or 16?

A. Right.

Q. Do you recall that, Doctor?

A. Yes.

Q. In respect of those children, Doctor, can you help me? I take it that they presented themselves at the hospital specifically as a result of having taken a relative's digoxin?

A. Correct.

Q. Right. They did not present themselves by virtue of any cardiac malformation, congestive heart failure, they were effectively healthy children were it not for the overdose of digoxin?

A. Yes.

Q. All right. Leaving aside then Doctor the issue of healthy children, can you help us as to the highest, and leaving aside the 18 or 19 children that we've discussed.

A. Yes.

Q. Can you help us in your personal





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experience as to what the highest antemortem level of digoxin in living children is with which you are familiar with children with congestive heart failure or cardiac malformations?

A. I guess the focus of my attention has been primarily in the last year or two on these children. I do remember the background of a child with coarctation of the aorta, I think when I was at Hopkins, that had like a 7 or an 8 but, you know, again we weren't doing routine digoxins those years either.

Q. Any other cases that you can think of, Doctor?

A. I have seen some of the literature again but I can't place a number with it.

Q. All right. Doctor, would you agree with me that in the instance of a healthy child who by accident or inadvertence ingests a quantity, a toxic quantity of digoxin, that in the instance of healthy child as opposed to a child who has exhibited or been diagnosed as having cardiac malformations, that the likelihood of an adverse effect on the electrical conduction system of the healthy child's heart is considerably less than the likelihood of an adverse effect on the conduction system of a







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cardiac patient?

3

A. Again, I don't think I can say

4

that because I have not studied the effects of

5

digoxin on a normal child's conduction system.

6

Q. Would you in your experience

7

not expect that to be the case, Doctor?

8

A. I don't know.

9

Q. Fair enough. Doctor then,

10

dealing also with the, again, still the same question

11

of antemortem levels. You have had a discussion this

12

morning with Mr. Shinchoft concerning the level of

13

concern or the level of digoxin reading which might

cause you some concern.

14

A. Yes.

15

Q. You had a similar discussion

16

with Mr. Scott, you may recall, during his cross-

examination.

17

A. Yes.

18

Q. Doctor, I would like to suggest

19

to you that in respect of elevated antemortem digoxin

20

levels there are perhaps two levels of concern: the

21

first from a purely therapeutic point of view, that

22

is, whether or not digoxin should be continued or

23

terminated in light of the reading that is obtained.

Would you agree with that?

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A. Yes, I would agree with that.

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Q. Secondly, as I understand your exchange with Mr. Commissioner several days ago, there is potentially another level of concern, and that is where the reading is sufficiently elevated at the stage of an antemortem reading it may be a level requiring an explanation quite apart from any therapeutic concern that you might have?

A. Correct.

Q. Is that correct?

A. Yes.

Q. And as I understood your exchange with Mr. Shinehoft this morning you indicated that if on the basis of an antemortem reading a level of 10 or greater than 10 were to be obtained, that would be of concern to you?

A. Yes.

Q. And I believe you told him from a therapeutic point of view that would be sufficient for you to terminate any further digoxin therapy?

A. Yes.

Q. And I ask you, Doctor, if a level of greater than 10 were obtained, again antemortem reading, would that also be of concern to you from the second perspective; that is is that sufficiently high to cause you to seek an explanation for that level?





CC.2

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A. Yes.

3

Q. And I take it then, Doctor, that

4

it naturally follows that if an antemortem level of

5

72 nanograms, for example, as in the case of Justin

6

Cook were obtained, that is a level in the knowledge

7

that that child was not prescribed digoxin in the

8

Hospital, would warrant in your view an explanation?

9

A. Yes.

10

Q. Doctor, you may recall as well

11

during the course of the cross-examination you were

12

asked to assist the Commissioner if you could as to

13

the methods by which a paediatric cardiologist can

14

look to determine the cause of death in respect of

15

any particular paediatric patient where it is his

16

responsibility to determine the casue of death.

17

Do you recall questions being put to

18

you with respect to that issue?

19

A. Yes.

20

Q. Right. Doctor, there are, I

21

take it you can agree, a number of tools which assist

22

a paediatric cardiologist in attempting to determine

23

the cause of death of a particular child, and I

24

suggest to you first in that regard that the notes

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of the attending physicians who took care of the child,

physically observed the child, would be of assistance?





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A. Yes.

Q. If you were seeking to determine the cause of death you would want to see and would seek out the notes of the attending physicians as to the child's condition?

A. Or if not the notes, at least his perspective and verbalization over what his impression was of the child.

Q. With respect to the notes, if they existed I assume that would be a useful tool for you to use and you would like to see them?

A. Yes.

Q. Right. Secondly, Doctor, I assume that we can agree it would be useful and that you would wish to know the opinion of the attending Fellows, the attending residents, the attending interns, quite apart from the staff cardiologist's observation?

A. Yes.

Q. And you told us I believe in cross-examination that it would be likely that the Fellow's notes would be contained in your Hospital, in your cardiology, in the zebra pack with respect to any individual child?

A. Yes.







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Q. So if you wanted to see the notes of the attending Fellows you would want to as well look at the zebra pack of the child?

A. Right.

Q. And you would expect in reviewing the medical record to see the notes of the attending interns, of the attending residents?

A. And as I said, the Fellows will have notes both places, sometimes chart. I tend to think, certainly in the last two and a half years, you know, there are more Fellows' notes in the chart than in the old days when there were more in the zebra packets.

Q. All right. And having looked at those two, Doctor, I take it as well that you would be interested as well to look at the nurses' progress notes, the entries in the progress notes made by the nurses which would also be contained in the medical record of the applicable child?

A. I would say this, Miss Cronk: certainly as - I have started to pay a lot more attention to nurses' notes in the last couple of years than I did before.

Q. That may be, Doctor. They are found in the medical record of the child?





CC.5

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A. Yes. I agree.

3

Q. And would you agree with me as

4

well that you would want, as has been suggested to

5

you in cross-examination, to examine the results of

6

any tests that were conducted on the child, be it

7

surgical or diagnostic process, and that in the

8

normal situation those test results would also be

contained in the medical record?

9

A. Yes.

10

Q. Right. And if the child would

11

have been put on a cardiac monitor, you would want to

12

see the ECG readings and tracings of the child?

13

A. Yes.

14

Q. And they might be contained

15

either in the medical record itself or alternatively

in the zebra pack, but in one of those two places?

16

A. Well, again, Miss Cronk, I think

17

that in an ideal world the answer would be yes, I

18

would hope that such rhythm strips taken from monitors

19

would be recorded for history.

20

I think the legacy of most hospitals

21

unfortunately, at least in my experience, has been

they have not been recorded.

22

Q. In the case of the children

23

that we have looked at, Doctor, and the cases that you

24

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CC.6

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are familiar with, I take it you would agree with me  
that in a number of situations they are in fact  
contained in the medical record?

4

A. Yes.

5

6

Q. And in some other instances  
they are contained in the zebra pack?

7

8

A. And in other instances they  
aren't contained at all.

9

10

11

12

Q. Right. You also told my friend  
Miss Forster in cross-examination it would be useful  
to you in attempting to determine the cause of death  
to review if it was available the preliminary and  
final autopsy reports?

13

14

A. Yes.

15

16

17

Q. And I take it, Doctor, that  
ultimately after those reports have been prepared,  
they too find their way to the medical record of the  
child?

18

A. Yes.

19

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Q. And, Doctor, you told us and I  
wish simply to be clear in your evidence in this  
regard, that it sometimes can lead to inaccuracies if  
a paediatric cardiologist in attempting to determine  
the cause of death relies only on the oral summation  
provided by attending residents as to the condition





CC.7

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of the child without in fact reviewing the medical  
record?

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A. That is true.

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Q. And in at least one instance,  
that of Real Gosselin, you have told us you found it  
a very useful exercise to review the medical record,  
and indeed it formed the basis of a change of opinion  
on your part as to the probable cause of death of that  
child?

10

A. Yes.

11

12

Q. The chart, as you said, speaks  
for itself?

13

A. Yes.

14

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16

Q. Doctor, you recall as well with  
respect to some of the specific children that we have  
discussed in your evidence your attention was drawn  
this morning to the case of Janice Estrella.

17

A. Yes.

18

19

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22

Q. Both by Mr. Ortved and by Mr.  
Roland, and in that regard you repeated what I had  
understood to be your earlier evidence, and that was  
that you did not become aware of the second postmortem  
sample or digoxin reading in respect of Janice  
Estrella until very recently?

23

A. That is correct.

24

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CC.8

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Q. Is that correct?

3

A. Yes.

4

Q. And as I understood your

5

evidence that was at some point after the commencement  
of these proceedings?

6

A. Again that is my impression. I

7

had known - I had been asked by the Crown about the

8

level. And again they referred to one level, and I

9

think it was basically when you asked me or Mr. Lamek

10

that I first knew there was two levels.

11

Q. After you became aware of that

12

second level, Doctor, did you have any discussion

13

with Dr. Taylor who we know, we have heard is in

14

Vancouver, with respect to the method by which he drew  
that sample?

15

A. No.

16

Q. And Mr. Roland in his re-

17

examination of you this morning, Doctor, drew your

18

attention to certain portions of the evidence of

19

Dr. Taylor at the preliminary hearing in the Nelles

20

case.

21

I would like to draw your attention,

22

Doctor, as well to a further passage from Dr. Taylor's

23

evidence found at page 121 of the transcript of his

24

evidence at the preliminary hearing which Mr. Roland  
did not read to you.

25





CC.9

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THE COMMISSIONER: Yes. Is there a  
volume number to that?

4

MS. CRONK: It is Volume 17.

5

THE COMMISSIONER: Thank you.

6

MS. CRONK: Page 121.

7

Q. With respect to the second post-  
mortem sample, Doctor, (the reading you will recall of  
greater than 4.7 was obtained) Dr. Taylor was asked  
this question:

10

"The amount that you obtained from  
the vein in the leg I take it would  
not have been diluted with any or  
contaminated with any other fluid?

11

12

13

"A. No, it was blood."

14

And then it goes on to discuss the first postmortem  
reading, the high reading of 72 nanograms.

15

16

A. Yes.

17

Q. I take it, Doctor, inasmuch as  
you do not know and have told us that you do not know  
how that sample was obtained, that you would, if  
Dr. Taylor were to attend at this Commission and to  
give evidence as to the method by which that sample  
was taken and as to the possibility of the likelihood  
of contamination with respect to that sample, you  
would defer to his opinion in that regard?

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CC.10

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A. Well, I would defer to Dr.

3

Taylor's opinion as to how he took the sample. I

4

would defer to the pharmacologist as to whether that

5

means it would lead to contamination of the sample.

(2)

6

Q. Fine, Doctor.

7

And with respect to the first post-

8

mortem sample realized on Janice Estrella, the 72

9

nanograms reading, and the issue of contamination in

that regard --

10

A. Yes.

11

Q. -- are you familiar, Doctor,

12

with the evidence given by Dr. Mancer at the

13

preliminary hearing with respect to that sample?

14

A. No.

15

Q. All right. Were you present  
when Dr. Mancer testified?

16

A. No.

17

Q. In Volume 2 of the evidence

18

at the preliminary hearing, Doctor, from the transcript

19

of Dr. Mancer's evidence, at page 435 he was asked

20

to comment on the finding in the contaminated sample

and the reference there was with respect to the level --

21

THE COMMISSIONER: I am sorry, is

22

this Volume 2?

23

MS. CRONK: I am sorry, sir, Volume 2,

24

page 435.

25





CC.11

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THE COMMISSIONER: Page 435.

3

MS. CRONK: Q. Are we clear, Doctor,

4

I am talking now about the first sample with the level  
of 72 nanograms?

5

6

A. Well, again, Miss Cronk, you  
have to remember I had thought until very recently  
there was only one sample.

8

Q. That is right.

9

10

A. So again I understand where you  
are reading from now.

11

12

13

14

Q. All right. With respect to the  
evidence given by Dr. Mancer, he was asked to comment  
upon the finding in the contaminated sample, and that  
referred to the first postmortem sample obtained.  
Right? And he responded:

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"Well, Dr. Taylor attempted to get  
blood from one of the large veins of  
the leg after the autopsy had been  
done. He had been asked prior to the  
autopsy by another staff member with-  
out my knowledge to do a digoxin test  
and he had forgotten to do this. But  
just as he had finished he remembered  
that he hadn't done it so they went  
down to the Hospital morgue and they







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"squeezed as much blood as they could from a leg vein and he realized that he couldn't get very much and he considered that it may be not possible to do a determination on that level. So he submitted it separately, and then he took as much fluid as he could from the abdominal cavity that looks like blood, but in fact would be a mixture of blood and other tissue fluid including possibly some of the edema fluid. Ordinarily this test other people should really be giving this information, but ordinarily this test is done on a sample and a reading is obtained which is in the range sort of expected.

"Well, this reading which was done on the first sample, the blood from the vessel, was off the scale. It couldn't be determined because it was too high, so what one would normally have to do is use the rest of the sample to dilute it down so that accurate readings could be obtained





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"on the series of dilutions and then finally one could come up with an accurate reading. Unfortunately there wasn't enough to dilute that down so they had to go to the blood that was obtained from the abdominal cavity. Likely this would have included ascitic fluid and as well blood that has oozed from small vessels that were cut during the autopsy. So I would think that that 72 is probably low if anything rather than a high estimate of the actual digoxin."

Dr. Freedom, with respect to the concerns about the possible contamination of the sample that resulted in the 72 nanogram level, would you agree with me that if the sample had been contaminated by virtue of the process that Dr. Mancer described in his evidence, it is possible that the effect of that contamination was to dilute the concentration of digoxin present in the sample, so that the reading in fact represented a lower reading with respect to concentration than might in fact have been the case?





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A. I find it difficult to address that, Miss Cronk. I think that if you have a contaminated sample it is contaminated and the question is how much. How much tissue necrosis was there? How much from intestines? And I would think you would need someone who was very experienced in the pharmacology of digoxin to say.

I don't think - certainly I am not an expert in the degradation of digoxin and I don't believe that Dr. Mancer is either.

Q. All right.

I take it then, Doctor, that as to the possible effect on digoxin concentration levels that contamination may have, you would defer to the opinion of the pharmacologist and the experts you have just described?

A. Yes.

Q. All right.

Then finally with respect again to the Estrella case, Doctor, as I understood your evidence this morning, and I believe it was in an exchange with Mr. Roland, but I may be wrong on that count, you indicated that in your view it was possible that the renal difficulties that Janice Estrella was experiencing during her life could account for the postmortem digoxin levels that resulted.





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CC.15

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Is that your evidence?

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A. No, I don't believe I said that.

4

I said that it could have accounted for her accumulation  
during life.

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Q. The higher reading during life?

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A. Yes.

7

Q. All right, Doctor.

8

And as Mr. Scott asked you earlier

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during cross-examination, I take it you at his request

10

had had an opportunity to and have in fact reviewed

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the transcripts of evidence of Dr. Rowe in these

12

proceedings?

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A. Yes.

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2 Q. To assist you, Doctor, and I  
3 don't think it will be necessary to refer you to the  
4 particular transcript, Dr. Rowe in his examination in  
5 chief, Volume 16, Mr. Commissioner, at page 2726 was  
6 asked this question, Dr. Freedom,

7 "Just one question if I may, please, in  
8 terms of the renal failure that you are  
9 suggesting was occurring here, does it  
10 not appear from the nursing notes for  
11 the 9th and the 10th, particularly the  
12 9th, we haven't come to the 10th yet - yes,  
13 and the 10th - that particularly with the  
14 assistance from diuretic lasix this child  
15 was in fact, it was in some sort of renal  
16 failure, coping with it, handling with  
17 it and eliminating urine.

18 A. As a result of the administration  
19 of lasix.

20 Q. Yes. Isn't that what lasix is,  
21 one of the things that lasix helps you  
22 to do?

23 A. Yes, it does."

24 Doctor, I had understood your earlier  
25 evidence to be that you were not involved in the direct  
26 care and management of this child?

27 A. That is correct.





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Q. Are you in a position to agree or disagree with the view expressed by Dr. Rowe that I have just read to you?

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A. Well, again, Miss Cronk, I have gone through the record for this proceedings and I am a little unclear as to what Dr. Rowe ended up saying. At least the way you read it.

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As I reviewed the charts there was some evidence of renal dysfunction.

Q. I don't think it was in dispute there was some renal dysfunction, Doctor. The selection of the transcript that I just read to you, and my understanding of his evidence, was an indication with which Dr. Rowe agreed that the record, the medical record for Janice Estrella, suggested that on the 9th and 10th, although she had had renal difficulty she was coping with it well on the basis of lasix, and her elimination, her excretion was in fact satisfactory with the assistance of that medication at that time.

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Are you sufficiently familiar with the course of Janice Estrella in the hospital to offer us any opinion in that regard?

A. Well, all I have in my notes is I believe it was towards the end of the baby's life she had a BUN of 19 which is certainly abnormal. So she





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may have been coping with it.

She needed lasix to improve her cardiac output to improve the perfusion to her kidneys. And those aren't incompatible in the sense that we have lots of children who have elevated BUNs who seem to cope, although there is still a rather significant cardiovascular difficulty.

Q. Well, Doctor, it may very well be that you are not sufficiently familiar with the progress of the child on the 9th and 10th of January, two days and the day before her death to comment upon the matter, but you have now suggested that the BUN's of the child were elevated according to your notes. Your notes also indicate that on the day prior to her death on January the 10th they were reduced and were in fact less than 5 according to the medical record.

A. Again my writing unfortunately is unclear and I can't read my date when the BUN was 19. If I had the chart I could certainly do that with you now.

Q. Well ---

A. But I take you - if the BUN had come down I take that, what you said.

Q. All right. I would simply refer you, Mr. Commissioner, to page 159 of the medical





1  
2 record, Exhibit 91, but in that regard, Doctor, as  
3 I leave this matter, as I understand it, you are not  
4 in a position to agree or disagree with Dr. Rowe's  
5 comments concerning the child's excretion functions  
6 on the 9th and 10th of January?

7 A. I would agree.

8 MS. CRONK: One final area, Mr.  
9 Commissioner, I would not expect it would take that  
10 long. I am in your hands. If you would prefer to  
11 press on I think I can be complete within 10 or 15  
12 minutes.

13 THE COMMISSIONER: Every time I have  
14 taken a vote everybody has been in favour of a break,  
15 but I think I will take another one.

16 You heard Miss Cronk. I don't know  
17 whether you trust her any more than I do. Assuming  
18 that it is 15 minutes, do you want a break or do you  
19 want to carry on?

20 All in favour of a break? I may have to  
21 count this one, I don't know.

22 MR. HUNT: If I could add something,  
23 Mr. Commissioner?

24 THE COMMISSIONER: Yes.

25 MR. HUNT: Much of the evidence which  
has been given by Dr. Freedom during this re-examination







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as relates to Gary Murphy is completely new.

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THE COMMISSIONER: Yes.

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MR. HUNT: And during the course of  
it I had some questions in my own mind that arise out  
of the evidence which I may make application to you  
to put to the witness once Miss Cronk is finished.

8

Now I am not sure, perhaps, if I had  
some time to discuss that.

9

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THE COMMISSIONER: I think in light  
of that we will have a break for 15 minutes.

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MS. CRONK: Thank you, Mr. Commissioner.

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---Short recess.

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Freedom, re.dr.  
(Cronk)

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/DM/ko

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--- Upon resuming

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THE COMMISSIONER: Yes Miss Cronk.

4

MS. CRONK: Thank you Mr. Commissioner.

5

Q. Dr. Freedom, I have one final

6

area you will perhaps be glad to hear. We have heard

7

in the course of your cross-examination, and as well

8

with reference to your examination in chief, the

9

expression of your opinion that you had the impression

10

in July and August, and indeed throughout the epidemic

11

period that the increase in deaths that was being

12

evidenced on the cardiology wards was attributable to

13

the introduction of sicker and younger children in

the cardiology wards, do you recall giving that

evidence?

14

A. Yes.

15

Q. And when asked I believe by

16

Miss Forster in the course of cross-examination, as

17

to your views as to the likely explanation for the

18

introduction of sicker and younger children, you

19

indicated first, as I understood your evidence, that

20

the number of ward deaths with the transition from

21

ward 5A to wards 4A/B might account for some

22

proportionate increase in sicker and younger children,

do you recall that?

23

A. Yes.

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Q. You recall as well during your exchange with Mr. Commissioner, with respect to the fact that the increase in infant beds alone might not necessarily indicate that the children who occupied those beds on 4A/B were sicker and younger, but simply there were more infants period on the ward, do you recall that?

8

A. Yes.

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Q. As I understood your evidence, Doctor, you indicated to Miss Forster as well that you thought the increase in referrals from Winnipeg hospitals to your hospital of cardiology patients accounted for the introduction of sicker and younger children as well. Do you recall that, sir?

15

A. Yes.

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Q. You were asked specifically whether amongst the children that you were familiar with, and that we have discussed, whether you could recall the number of children who had been referred to the hospital from Winnipeg, with the exception of Real Gosselin, which was mentioned and you will recall was a direct referral from Winnipeg?

21

A. Right.

22

Q. Do you recall that?

23

A. Yes.

24

25





Freedom, re.dr.  
(Cronk)

1  
2 MS. CRONK: Mr. Registrar, could you  
3 show Dr. Freedom Exhibit 33A if you would.

4 Q. Do you have that Doctor, it  
5 appears to be to your left there. Exhibit 33A  
6 Doctor is a list of the total deaths by period for  
7 the epidemic period, that is July 1, 1980 to March  
8 31, 1981, introduced in evidence through Dr. Anne  
9 Gilmour-Bryson early in these proceedings. There are  
10 64 children listed on that list, the last names of each.  
11 If we were to add the death of Laura Woodcock on June  
12 30th, one day before the onset of the epidemic period,  
that would take our number to 65.

13 Would this list of the names of all those  
14 children who died, either on wards 4A/B, or during the  
15 epidemic period, having had some connection with the  
16 cardiology wards Doctor, in reviewing that list can  
17 you identify any others who were referrals from  
Winnipeg and subsequently died on the cardiology wards?

18 THE COMMISSIONER: Would that be  
19 others other than Gosselin?

20 MS. CRONK: Other than Real Gosselin,  
21 yes Mr. Commissioner.

22 THE WITNESS: I am not familiar with  
23 all these names, that is the problem.

24 MS. CRONK: Q. To be of assistance to  
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you, Dr. Freedom, and I fully understand that you would not have participated in the care and treatment of many of these children. It is my information and understanding that of the deaths which actually occurred on wards 4A and 4B during the epidemic period, that the only child referred from Winnipeg was Real Gosselin. Now, of the names that you do recognize is there any other that you can identify as having been a referral from Winnipeg?

A. I would have to take a look at Baby Bird, or the child Bird, fourth on the list.

Q. All right, I am sorry Doctor to assist you further, of the deaths on the wards 4A and 4B, as I said my information is that the only death that was a Winnipeg referral was Real Gosselin. There were however six other children who died either in the ICU, having gone there from the operating room, or in the operating room not having come directly from the wards, and they include the Bird child, the fourth one you have just indicated: the Martell in the first column; the Houle child, in the second column, do you see that Doctor?

A. Yes.

Q. The Martin child in the same column; the Murdock child in the same column.





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A. I am sorry Miss Cronk, you are saying these children died elsewhere?

Q. Died elsewhere.

A. I am saying as well, and again I have not gone over these, but certainly I think Nancy Falcao in the first line left of the page died elsewhere.

Q. I am sorry Doctor, we are talking about Winnipeg referrals who died elsewhere.

A. Okay.

Q. As I understand Nancy Falcao was referred from Toronto.

A. Okay. I am just saying as I read this it says death, I assume it is wards 4A/B. Certainly a substantial number of these children that I am familiar with didn't die on 4A/B.

Q. Two points. As I understand it the list of 64 children to which I have added Woodcock for 65.

A. Yes.

Q. Represents children who actually on wards 4A/B during the nine month, or died in another location in the hospital, namely the ICU or the OR, having gone there from wards 4A 4B, do you understand that?





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A. Yes.

Q. Now in addition to the Houle child, the Martin child and the Murdock child in the second column, it is my understanding the sixth child referred from Winnipeg was the Roulette child who died in the ICU having gone there from the operating room. Now, if my information in that regard is correct Doctor, that would mean that of the 65 children disclosed in this exhibit there were a total of seven who were referred from Winnipeg and who died in the hospital, and of those only one died on wards 4A, 4B and that is Real Gosselin. You may not be able to assist me with it in confirming that information.

My question to you is merely this, that having the names now before you of the total deaths during the epidemic period, can you identify for us any other child who was referred from Manitoba?

A. That died?

Q. That died, looking at the names on the list.

A. No, I can't. I am just not familiar with a lot of these names and their charts, so I would have to bow to the review that you have done.

Q. Thank you, Doctor. As I





Freedom, re.dr.  
(Cronk)

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understood your responses to questions put to you by Miss Forster on the issue of Winnipeg referrals, or Winnipeg exodus as it has been called, as I understood it you told her that you thought that the referrals had commenced in 1979 or 1980 in increased numbers and they had continued until approximately six months or a year ago, do I have that correctly?

A. Yes.

Q. That would mean then Doctor I take it that at the outside, in September of 1982, there was a marked reduction in the number of referrals from Winnipeg?

A. Again Miss Cronk, when I gave evidence I was pretty vague on it and I still am. I have not been able to find out exactly when it started or when it ended, but those are just my own impressions.

Q. Does it accord with - perhaps you can help me this far Doctor, does it accord with your recollection that the increase in referrals from Winnipeg continued beyond the months of July and August, 1980 but through the months of September, October and November of 1980 as well?

A. Again that is my impression but I could be wrong.

Q. As far as you know sitting here







Freedom, re.dr.  
(Cronk)

DD 8

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today that was the case?

3

A. As I said, that is an impression.

4

I guess if I went through the entire surgical list

5

before the epidemic period, taking each patient and

6

trying to find out whether they were from Winnipeg or

7

elsewhere we could get at that, again it is just an

8

impression.

9

Q. In an effort to understand your

10

impression Doctor, I take it that your impression was

11

that this was not an increase in referrals particularly

to summer months, but it was ongoing thereafter?

12

A. Yes.

13

Q. Throughout the fall when we know

14

the deaths on the cardiology wards decreased?

15

A. Yes.

16

Q. As I understood your exchange

17

with Miss Forster, you indicated potentially a third

18

reason for the increase in deaths and the introduction

19

of younger and sicker children to the wards as you

20

understood it, was the suggestion that the ICU was

21

becoming filled very quickly in part perhaps referable

22

to the fact the transport helicopter was in operation

commencing the summer of 1980. Do you recall that

23

evidence?

24

A. Yes. Again I was vague, and I

25





DD 9      1  
2      said it was my recollection of about four years ago but  
3      I could have been off by a year or so.

4                    Q.      Do I have your evidence correctly  
5      Doctor, that you had the impression then over the  
6      summer of 1980, and you can tell me if I am wrong, the  
7      fall of 1980, that the ICU was experiencing a overfill  
8      situation such that children were being released to  
9      the cardiology wards sooner than you would have  
10     preferred to have them released and returned to the  
11     wards?

12                   A.      Yes, certainly on some occasions  
13     that is correct.

14                   Q.      Doctor, amongst the children we  
15     have discussed in your evidence and in respect of whom  
16     you have given evidence in cross-examination, can you  
17     help me, is there any child you can identify that was  
18     released from the ICU, in your view prematurely, back  
19     to the cardiology wards?

20                   A.      I would be concerned, I believe,  
21     I have to look through my notes whether it was a note  
22     for Belanger that was released with left lung collapse.  
23     I would be concerned about Kelly Monteith, and we  
24     discussed that together. I was concerned, as you know,  
25     that Dion Shrum was not taken to the ICU.

26                   Q.      Can I stop you there, Doctor?





DD 10

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A. Yes.

3

Q. I would like to, if I could,

4

focus your attention for the moment not on the

5

children being admitted to the ICU, but children being

6

transferred from the ICU. In the case, you have

7

mentioned Jesse Belanger, as I understand it my

8

recollection is there is a direct reference in the

9

progress notes that that child was transferred from

10

the ICU to the neonatal ward because of a bed

shortage in the ICU.

11

A. Correct.

12

Q. Does that accord with your

recollection of the notes on that child?

13

A. Yes.

14

Q. So that in an overfill situation

15

a shortage of beds, having regard to the age of Jesse

16

Belanger, that child went to the neonatal ward with

17

some increased degree of monitoring over and above

18

that available in the cardiology wards was available

for the child?

19

A. And then it was a very short

20

time the child was transferred back to the fourth

21

floor.

22

Q. And then came back from the

23

neonatal ward to the fourth floor?

24

25





Freedom, re.dr.  
(Cronk)

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A. Correct.

3

Q. And you have indicated that in

4

your view Kelly Monteith as well was transferred

5

from the ICU at a date earlier than you would have

6

preferred to see that transfer?

7

A. Again I didn't make the

8

decision to transfer her. In reviewing it now in

retrospect I think that was a consideration.

9

Q. Doctor, other than those two

10

children, amongst the children that we have discussed,

11

did you form the impression with respect to any of

12

the children in whose care you participated that

13

they were transferred out of the ICU at a time when

14

having regard to their condition it would have been

preferable they should not?

15

A. I think of the patients that

16

you and I discussed, the answer is, no.

17

Q. Now dealing with the question

18

of transfers into the ICU Doctor as opposed to

19

premature, essentially premature transfers out of

20

the ICU. You have told us previously in evidence

21

and I believe you repeated it under cross-examination,

that in terms of children that you would have

22

preferred to have seen admitted to the ICU that were

23

not admitted to the ICU you can point to the case of

24

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DD 11







Freedom, re.dr.  
(Cronk)

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Dion Shrum?

3

A. Correct.

4

Q. Now I asked you whether or not

5

during the summer of 1980 there were any other

6

patients, infants that you cared for, other than

7

Dion Shrum who you would have preferred to see in

8

the ICU, and as I recall your evidence the answer to  
that was no?

9

A. That is correct.

10

Q. Throughout the fall of 1980

11

Doctor, through the spring of 1981 until the end of

12

March 1981, apart from the case of Dion Shrum, was

13

there any instance when you felt the child should

14

have the care provided by increased and more intensive

15

monitoring to be afforded by the ICU where you could

16

not arrange for the transfer of that child to the  
ICU?

17

A. I would rather you address that

18

to the time when I was ward chief. Because obviously

19

I would be then directing some of the children to

20

the ICU. I can't address to what happened in

21

November/December when I was not the ward chief

22

seeing the patient at the time.

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Q. Let's take it Doctor then in

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respect of the children in whose care you participated.

A. Well other than --

Q. Of those 18 or 19 that we discussed, other than Dion Shrum?

A. Again I think that is a little bit unfair Miss Cronk because although we discussed 18 or 19, my contact with them was on 7G, a number of them, in the cath lab, and I think if we looked at the ones we discussed where I was ward chief there are relatively few under consideration, and except for Shrum I would agree.

Q. And as I understand your evidence with respect to Dion Shrum, the decision not to transfer that child to the ICU was not a result of any suggested bed shortage, or overfill situation in the ICU, but rather an intensivist from the ICU was consulted, and it was his view as you told us that the child did not at that time require the extra degree of ventilation or monitoring that you had considered as possibly necessary?

A. Correct.

Q. Doctor, finally do you recall that during the cross-examination by Miss Forster, your attention was drawn again to the terminal





Freedom, re.dr.  
(Cronk)

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events suffered by Antonio Velasquez prior to his death?

A. Yes.

Q. And do you recall during the course of that exchange Doctor being asked to confirm that the only symptom of digoxin intoxication that appeared to have been suffered by Antonio Velasquez before the administration of the first does of naloxone was the bradycardia that was noted in Dr. Wilkinson's memorandum?

A. Right.

Q. Do you recall that Doctor?

A. Yes.

Q. Fairly Doctor - Mr. Registrar, could Dr. Freedom be given the Velasquez chart which I believe is Exhibit 54. Do you have that, Doctor, beside you there? I am sorry Doctor, right immediately to your left.

A. Yes, I do.

Q. Could I ask you Doctor to turn with me if you would to page 29 of the record?

A. Yes.

Q. Do you have that?

A. Yes.

Q. As I understand it Doctor, this





Freedom, re.dr.  
(Cronk)

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is the arrest note completed by Dr. Costigan at the time of the Code 25 on Antonio Velasquez, do you recognize it as such?

A. Yes, I see his signature at the bottom right.

Q. And if we review the arrest note, Doctor, taking this in two different points in time.

A. Yes.

Q. First, the symptoms or the conditions manifested by Antonio Velasquez prior to the administration of naloxone: and secondly, the symptoms demonstrated or exhibited by that child prior to his pronouncement of death?

A. Okay.

Q. We see that in the initial part of the note it is indicated that the child had that day been tachycardic?

A. Correct.

Q. It is further indicated that he developed brady-arrhythmias?

A. Correct.

Q. Somnolence?

A. Correct.

Q. And small pupils?







Freedom, re.dr.  
(Cronk)

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DD 16

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A. Correct.

3

Q. And he was then given naloxone

4

4.4 milligrams by IV?

5

A. Right.

6

Q. Stopping there at that point

7

Doctor, that is prior to the administration of

8

naloxone, I take it, would you agree with me, that

9

the symptoms were the manifestation of tachycardia,  
brady-arrhythmias, somnolence and small pupils, are

10

consistent with digoxin intoxication?

11

A. No, I do not.

12

Q. Is tachycardia in your view

13

not consistent with digoxin intoxication?

14

A. Again this child was febrile

15

and certainly one of the earliest responses to a  
child with fever is a faster heart rate, tachycardia.

16

Q. Amongst the four conditions

17

described there Doctor, before the administration of  
the first dose of naloxone?

18

A. Yes.

19

Q. Do we not find symptoms which

20

are commonly regarded as being consistent with  
digoxin intoxication?

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A. Again the one note I don't

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see here is Dr. Costigan talking of the time of the

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Freedom, re.dr.  
(Cronk)

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DD 17

timing of the codeine, where again codeine certainly would  
make one somnolent.

Q. Doctor, fairly, and I want to  
be clear that I am not suggesting that any of these  
conditions, because I understand your previous  
evidence and that of Dr. Rowe, any of these conditions  
are indicative conclusive of digoxin intoxication.

My question to you merely is whether  
or not the conditions that are described and  
exhibited by the child prior to the first dose of  
naloxone are consistent with what you as a  
cardiologist know to be commonly accepted symptoms  
of digoxin intoxication?

A. Certainly one in isolation,  
and one can see brady-arrhythmia with digoxin; one  
can see somnolence. I do not think that small pupils,  
at least as far as I recollect from my experience,  
is consistent with digoxin.

Q. All right, fair enough, Doctor.  
And tachycardia is something I take-you would as well  
be aware of as a symptom, now regarded as consistent  
with digoxin intoxication?

A. No, not tachycardia.

Q. Not tachycardia, you would  
be surprised to see that in a situation where a





Freedom, re.dr.  
(Cronk)

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DD 18

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child appeared to have toxic effects from digoxin?

3

A. Yes.

4

Q. And continuing on Doctor to

5

the situation following the administration of the

6

first of naloxone, we see Dr. Costigan's note again  
makes reference to tachy-arrhythmias.

7

A. I am sorry, what line are you

8

Miss Cronk?

9

Q. Two lines after the indication

10

he was given naloxone .4 milligrams.

11

A. Okay.

12

Q. Tachy-arrhythmia, then

13

asystole?

14

A. Right, asystole.

15

Q. I am sorry. Then indicates

16

Code 25 was called, and in the balance of the note  
we again see an indication of bradycardia?

17

A. Correct.

18

Q. And irregularity on the ECG?

19

A. Correct.

20

Q. So he was experiencing, I take

21

it, monitor or ECG changes, which again would be  
commonly regarded as at least consistent with

22

digoxin intoxication?

23

A. Yes.

24

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Freedom, re.dr.  
(Cronk)

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DD 19

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Q. Thank you Doctor. Doctor,  
one very final and one very brief point that is  
more of a housekeeping nature. You recall our  
discussion with respect to Dion Shrum, you  
indicated when we were considering the timing of  
the monitoring of vital signs of that child, we  
were considering the timing that had been indicated  
in the flow sheet. You indicated in your evidence  
that you felt that it was possible that there was  
something missing, a page missing from the doctor's  
orders from the flow sheet pages, or from the  
nursing progress notes with respect to a direction  
as to the timing at which to take vital signs. Have  
you, since giving that evidence, searched the file  
to determine whether or not there is something  
missing?

A. Yes, I could not find another  
page. But again as we addressed together I saw the  
note in the nursing notes that increased monitoring  
was suggested. So I presume that is where it came  
from.

THE COMMISSIONER: What child is  
this?

MS. CRONK: This is Dion Shrum Mr.  
Commissioner.







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Q. Do you recall where that indication was made in the notes?

A. If you gave me the chart I could find it for you.

Q. I won't trouble you with that Doctor. I take it though that on your further review you were unable to locate any further doctor's orders as to the time at which vital signs were to be taken?

A. Right, just the statement in the nursing progress notes that two doctors suggested increased monitoring.

MS. CRONK: Thank you Doctor, you have been very helpful, those are all my questions Mr. Commissioner.

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Freedom,

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THE COMMISSIONER: Yes, than you.

Now Mr. Hunt. Oh, yes.

MR. ROLAND: I had the same concern  
Mr. Hunt does.

THE COMMISSIONER: Well, let's address  
it.

MR. ROLAND: Miss Cronk got very  
extensively into the Murphy case and that wasn't  
something that had come out at any stage.

THE COMMISSIONER: I thought it came  
out from you, or at least from Mr. Scott.

MR. ROLAND: Well Mr. Ortved asked one  
particular question about it having to do with his  
impression about his changed impression about the  
left ---

THE COMMISSIONER: Tell me, what is  
it you want to ask the Doctor.

MR. ROLAND: Well in particular it is  
a question concerning the dig levels in the Murphy  
case, in the Gary Murphy case.

THE COMMISSIONER: Would it not be  
better if we hear from Mr. Hunt first, or do you want  
to ask a question without the benefit of hearing from  
him first.

MR. ROLAND: All right.





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THE COMMISSIONER: What did you have in mind, did you have something you wanted to ask?

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MR. HUNT: Yes I have, Mr. Commissioner. The questions I have really pertain to Dr. Freedom's opinion of the significance of the Murphy case in terms of his own development and understanding of digoxin, and the answers that he gave to my friend with respect to some of the evidence of Dr. Kauffman at the Murphy Inquest.

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THE COMMISSIONER: There is no reason why you can't ask those questions. Remember that on digoxin Dr. Freedom has indicated that he would rely upon the opinions of pharmacologists as to the benefit or value of digoxin reading. I wouldn't have thought, and I'm not in any way - I don't mean to indicate he is not familiar with all of these methods, but he is not as familiar as a pharmacologist, but if you want to ask some questions do you?

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19

MR. HUNT: Yes.

THE COMMISSIONER: What has affected his views on that?

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21

MR. HUNT: I appreciate that he has deferred to the expertise of clinical pharmacologists.

22

THE COMMISSIONER: Yes.

23

MR. HUNT: When it comes to digoxin

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25





Freedom

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and its presence. He has however indicated that the Murphy case was of some significance to him. He has rejected the view of Dr. Kauffman, the clinical pharmacologist, given in the Murphy case and it was put to him by my friend Miss Cronk and I have several questions arising out of that.

8

9

THE COMMISSIONER: All right, let's have them then, unless somebody else wants to argue he is not entitled to ask these questions. Miss Symes?

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MISS SYMES: Mr. Commissioner, I don't wish to argue Mr. Hunt should not ask these questions, but I feel slightly disadvantaged in that most of the people in this room seem to have Dr. Kauffman's evidence that he gave at the Inquest, and since it is being used in cross-examination ---

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18

THE COMMISSIONER: I tell you the one thing I am not going to permit, I really do feel that Dr. Freedom should go today, I can't give you time to read it if that is what you have in mind.

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MISS SYMES: I am not asking you that, I am asking if it is going to be used by Commission Counsel with respect to cross-examining witnesses that in fairness all parties should have it.

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THE COMMISSIONER: I am sorry, did you not, I take it we haven't distributed ---







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MS. CRONK: If Miss Symes would like a copy we would be glad to provide it, we have done so with others.

THE COMMISSIONER: Yes, all right. You can certainly have a copy of it, but not so as to permit you to burn the midnight oil tomorrow and call Dr. Freedom back.

MISS SYMES: No, that is not what I am asking.

THE COMMISSIONER: Well come on, I am prepared to sit here until midnight until I finish with you and Mr. Roland.

MS. CRONK: Perhaps the witness should be consulted.

THE COMMISSIONER: I think the witness is with me on this.

THE WITNESS: Right on.

THE COMMISSIONER: I may be wrong.

THE WITNESS: We can go later than that.

THE COMMISSIONER: I think the witness wants to get back to his job and I am going to assist him as far as possible and assuring that that happens. Yes all right now, Mr. Hunt proceed.

FURTHER CROSS EXAMINATION BY MR. HUNT:

Q. Now, Dr. Freedom, we have already I think agreed that Dr. Kauffman is, to your





Freedom, cr.ex.  
{Hunt)

3-5

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knowledge a paediatrician?

3

A. Yes.

4

Q. And a clinical pharmacologist?

5

A. Yes.

6

Q. And as a clinical pharmacologist

7

he is one of the people to whom you defer insofar as

8

expertise with respect to digoxin, its effects and the

9

significance of various levels post mortem are concerned?

10

A. Yes.

11

Q. And in connection with the

12

death of Gary Murphy, Doctor Kauffman was asked to

13

explain the levels of digoxin that were found following

14

death, and he indicated, and I am referring to page

44, it is a very brief reference so I will just read

them. He indicated:

15

"I think we have to try to interpret

16

this child as best we can in the

17

context of the child's overall picture."

18

In other words he is suggesting the

19

entire clinical progress of the child had to be looked

20

at in assessing the significance of the digoxin levels.

Now, you would agree with that?

21

A. Yes.

22

Q. And in looking at the levels

23

he says:

24

25





Freedom, cr.ex.  
{Hunt)

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"The levels are not normal levels."

3

You would agree with that?

4

A. Yes.

5

Q. He says:

6

"This was not a normal child."

7

Do you agree with that?

8

A. Yes.

3-6

9

Q. He said:

10

"The child was very exceptional  
physiologically and anatomically and they are not  
normal levels."

11

12

Would you agree with that statement?

13

A. I guess I have a little concern

14

about the word "exceptional", in the sense many of  
these babies under discussion had terrible heart disease.

15

He was a little bit unusual in the sense, not only did

16

he have reduced flow to his lungs, but in terms of

17

a poor flow, but the way blood came back from his

18

lungs was obstructed. So in terms of 36 infants under

19

discussion he was different in that regard.

20

Q. He certainly had a terrible  
heart disease?

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A. But many others did as well.

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That is the point I was trying to make.

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Q. This baby's heart disease was

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much worse than some of the others?

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A. Well, it was certainly a very

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severe heart disease, worse than some.

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Q. Right. Am I right it was

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inoperable?

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A. Yes.

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Q. Now, in as much as Dr. Kauffman

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found the child to be, in his words, exceptional

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physiologically and anatomically and in looking

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at him in the full context of his clinical progress

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he said:

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"I do not think that you can extract

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anything from this very unique situation

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necessarily to the literature or to other

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cases".

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Now, do you agree with that?

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A. Again I don't know what was

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going through Dr. Kauffman's mind when he said that.

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I guess one of the questions I would have from Gary

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Murphy versus any of the other babies is, does the

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type of severe heart disease that a youngster has,

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does that determine the change in binding after death;

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that is, if a child had inadequate blood flow to the

lungs plus let's say pulmonary vein problems like







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Gary Murphy, well, will that alter his postmortem metabolism so to speak in terms of the way digoxin is released versus another heart condition. I think that's the bottom line as far as I perceive Dr. Kauffman's concerns.

Q. Well, would you agree Dr. Kauffman is a better person to make those types of assessments?

A. I would certainly say that he is the expert. I quarrel a little bit with the comment about the type of heart disease.

Q. All right. But we do agree the child suffered from very severe heart disease?

A. Correct.

Q. Inoperable.

A. Correct.

Q. Many of these children suffer from heart disease but it was operable, amenable to surgery?

A. Yes, certainly in some.

Q. All right. I put to you that if Dr. Kauffman says that I don't think you can extract anything from this unique situation necessarily to the literature or to other cases I think that would be real dangerous to do, would you defer to him





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with respect to that?

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A. Yes.

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A. Yes, I would agree with that.

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Q. So, to that extent, Baby Murphy  
is certainly unique?

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THE COMMISSIONER: I'm sorry, Baby  
Murphy ...?

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MR. HUNT: I'm sorry, to the extent  
that Baby Murphy was on digoxin prior to death  
he certainly differs from those babies that were  
not prescribed digoxin prior to death and in whom  
digoxin was found postmortem.

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A. Yes.

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Q. All right. Would you agree that  
Baby Murphy certainly differs from those babies who  
were not suffering from any anatomical defect in the  
heart?

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A. Such as?

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Q. Pacsai.

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EEL-4

A. Yes.

MR. HUNT: Thank you, those are all the questions I have.

THE COMMISSIONER: Yes. Thank you, Mr. Hunt. Before I call on Mr. Roland does anyone else want to ask any further questions relating only to Gary Murphy?

All right. Mr. Roland.

MR. ROLAND: Very briefly.

FURTHER RE. EXAMINATION BY MR. ROLAND

Q. Dr. Freedom, Ms. Cronk took you to your evidence given in response to questions made by you to Mr. Ortved, in particular at page 5596 she asked you about your evidence that it was your understanding that the digoxin level for Gary Murphy was in the 20s and 30s?

A. That is correct.

Q. And we have heard this afternoon that in looking at the hospital chart that that translated to nanograms, certainly the level taken by the hospital postmortem translated into nanograms worked out to I think 18.7. However, I understand that as well at the Murphy Inquest there was evidence given by Mr. Cimbura as a result of tests that he did on blood taken from various parts of Gary Murphy





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at postmortem and that those readings were substantially  
higher than 18.7. Is that your understanding?

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A. That is correct.

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Q. In fact the report that I have  
from the Centre of Forensic Sciences dated May 16th,  
1983 shows some levels as high as 32.2 nanograms.

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THE COMMISSIONER: Nanograms or nanomoles?

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MR. ROLAND: Nanograms. It is the old way of doing it.

THE COMMISSIONER: I'm sorry, did they do it both ways?

MR. ROLAND: No, it appears that the Centre of Forensic Sciences only did it the old way.

THE COMMISSIONER: Oh, I see, all right.

MR. ROLAND: And they have some readings. They have a whole host of them but the very first one shows a reading of 32.2 from the blood from the heart.

THE COMMISSIONER: No, I wonder -- If judgment were going to be given tonight I can understand your wanting to do this but we are going to have Mr. Cimbura back to deal with that.

MR. ROLAND: Yes.

Q. Did you have in mind those readings as well when you said you thought digoxin levels were in the 20s and 30s?

A. Yes, I had been told that Mr. Cimbura's levels were considerably higher than the Sick Children's levels.

Q. Yes.

A. That's where I said 30 because I knew he had some level in the lower 30s.





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Q. All right. One other thing dealing with Gary Murphy. We have it in evidence that there was ventricular fibrillation at the time of the arrest and as I understand your evidence there is no indication one way or the other from the chart whether there was arrhythmia or tachycardia or bradycardia prior to that, that is prior to the arrest.

A. Yes.

Q. But ventricular fibrillation as I understand it is not consistent with there being bradycardia prior to the arrest.

A. That is correct.

Q. And that there is some indication of vomiting within hours of the arrest?

A. Correct.

Q. And with that information and with the information that I provided to you today that there was digoxin found in postmortem samples for Gary Murphy as high as 32.2 nanograms per millilitre, if Gary Murphy had died back in March of 1981 how would you have characterized his death if he died let's say between Miller and Cooke?

A. I would have been very concerned back in March of 1981 that he had been given an overdose of digoxin.





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Q. Yes. As you were concerned with respect to Pacsai and Miller I take it?

A. Correct. And Cooke.

Thank you, those are all the questions I have.

THE COMMISSIONER: Ms. Cronk?

MS. CRONK: No further questions, Mr. Commissioner, thank you.

THE COMMISSIONER: I think it would be a good idea Dr. Freedom, and thank you very much, but I think it would be a good idea for you to go just as soon as you can.

THE WITNESS: Thank you very much, Mr. Commissioner.

THE COMMISSIONER: Thank you indeed.

--- witness withdraws

THE COMMISSIONER: Now, if no-one has anything else then it will be tomorrow morning.

Yes, Mr. Tobias?

MR. TOBIAS: Yes, Mr. Commissioner, just very briefly. There appears to be a minor problem with certain exhibits, about five in all I believe, which were produced by various counsel. I have been canvassing counsel and have been told that in the case of these five exhibits counsel





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gave the Registrar the only copy they had of the document and was not aware if that document had been photocopied and distributed to counsel.

I wonder if I might just give the Registrar now the numbers and if he could check on that and advise us tomorrow.

THE COMMISSIONER: Yes, all right.

MR. TOBIAS: They are exhibit 153, which was produced by Ms. McIntyre, exhibits 155 and 164 which were introduced by Mr. Roland and Mr. Scott and exhibit 157 which was introduced by Mr. Olah and exhibit 165 which was introduced by Mr. Ortved.

In the case of Messrs. Scott, Roland and Ortved in particular they have advised me that to their knowledge copies have not been circulated.

THE COMMISSIONER: Well then can we look into that and see what can be done, Mr. Registrar.

Anything else?

Well then 10 o'clock tomorrow morning.

--- whereupon the hearing to be reconvened on Tuesday, September 12th, 1983 at 10:00 am.









